ORNAMENTAL DESIGNS

FOR

FURNITURE AND HOUSE DECORATION,

BEING A SERIES OF DESIGNS IN LITHOGRAPHY,

SELECTED FROM THE WORKS OF THE BEST FRENCH AND GERMAN ORNAMENTALISTS.

WITH A TREATISE ON PERSPECTIVE,

AND

AN INTRODUCTORY ESSAY ON ORNAMENTAL ART

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AN ESSAY ON ORNAMENTAL ART;

CONTAINING

A HISTORICAL SKETCH OF THE DECORATIVE ARTS, WITH SOME INQUIRY INTO THE THEORY OF ORNAMENT.

ILLUSTRATED WITH TWENTY-ONE FIGURES.

In presenting to the public this Treatise on the subject of Ornamental Art, the Author may be allowed to express his sense, that the subject is one which ought to be discussed with much more study, and in greater order, than he has been able to do: having been called upon without preparatory warning, and being occupied with the duties of his situation during its composition. What he was able to accomplish he did with much pleasure, in the hopes that it may not be unserviceable in pointing out the main features of the subject, and in furnishing the student with a well-considered sketch. It is but justice to all parties to state that his connection with the work did not extend to editing or selecting the examples: a task the difficulty of which will be readily acknowledged.

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ESSAY ON ORNAMENTAL ART.

I.

The art of Ornamental Design is now becoming appreciated both by the public and by the manufacturer, by the consumer and producer of all the innumerable appliances of modern life. A few years ago the application of the fine to the useful arts was scarcely thought of; but at the present day, however distant we may be from anything like a true understanding of their necessary connection, a beginning has been made, the question agitated, and a field opened, wide enough for the advancement both of genius and speculation.

Until lately, *plainness*, the absence of decoration, had been the fashion for nearly a century. Not only were the enrichments of art neglected, they were positively eschewed, and with architectural correctness rose the idea that colour was incompatible with taste, that blank walls were classic, and that uniformity and simplicity were the same thing, and formed the true element of beauty. Such was the prevailing feeling in relation to architecture and interior painting from the time of Verrio and Sir James Thornhill; meanwhile in the immense field of manufacture, although England, by the force of machinery constantly improving, and immense resources in capital and material, became the workshop of the world, success was attained in spite of the greatest neglect of taste, and by the sheer force of the "substantial,"—by usefulness "newly improved." In every corner of the world were the products of the English furnace and loom to be found; half of the human family was clothed by us; the conveniences and appliances of civilized life multiplied to infinity by us; the linen for the Moslem's turban, the tomahawk of the Indian, came from the English merchantman, and it became impossible to land even on a desert island without finding a trace of former commercial visitation, or to cross the vast chain of the Andes without stumbling upon the fragments of a cast-iron pot, genealogically authenticated by the word "Carron." The region of taste was the only *terra incognita* to the men of the power-loom and the forge. This, however, is not so much the case now, or if it still holds, we may safely say that we have got over the first and most difficult step towards improvement, namely, the knowledge of our deficiency. The indications of this are manifold,—so much so as to prove something like the setting in of a current, and to give promise that the future artist will be a much more generally useful agent than hitherto; that his sphere will be extended from the narrow walls of the exhibition room, or the bookseller's shop, to the whole range of the industrial arts; that some knowledge of drawing will be essential to the well-qualified workman, and the designer become one of the most important members of the commercial community.

The diffusion of a knowledge of our subject will, however, be found sufficiently grave to require many years for its accomplishment; many publications for its simplest development: the necessary studies have become so numerous and varied, each style possessing its own distinctive principles, and properly understood, its own relation to the material to be used or the position to be occupied.

In considering the periods of art in the past, we find that with all the ancient nations ornamental design was distinguished by peculiar characteristics,—that the designers trod in one path from which they never diverged,—that *authority* had an overruling power with them, and *invention* was comparatively little sought: so that a moderate degree of experience enables the critic to say at once, where, and at what period, any work either of high or of decorative art has been produced. Indeed, this fact, as we shall notice elsewhere, affords us a key to the understanding of the true nature and proper uses of decoration. In the middle ages, this distinctness of prevailing mode, this unity in the form of the thought of the age, so to speak, was also maintained. The Gothic architecture presents a gradation from the dark, low, massive masonry to the heaven-pointing pinnacles of the triumphs of mechanism; from the round arch and round church to the perfect Christian temple enriched in all its parts—as justly progressive, as the development of a tree or a flower. Out of the hard soil first appears the green stem, enclosing the future leaves as yet firmly united, forming, as it were, a wedge to pierce upwards into day. This is the first, the naked necessity of first development, the Cyclopean beginning, although beautiful as all manifestations of natural force are. Development commences, leaf after leaf divides from the parent stem, which meanwhile growing also, lifts them above the earth and gives them freedom for expansion, and at length, from the hard nucleus, the birth of the bloom repeating in process the birth of the plant; the clear colour appears, "the bright consummate flower" unveils itself to heaven, beloved by the bee and the butterfly. As this is the development of the natural flower, so is the evolution of the flower of true art, whether Gothic or any other form which has made a lasting impression on the world. The initiatory step contained all those that followed it, that is to say, each successive step was necessary to the last; the impetus was forward. A principle was included, and directed the workmen; there were no arbitrary novelties or innovations,—no erratic experimentalizing,—no looking either to the right hand or to the left, and less backward. The progression was gradual, taking centuries to work out,—architect, mason, and decorator, working in harmony and patience; but the result was completeness, a completeness in reference to those principles from which they started. This relative perfection, wherever it is found, and perhaps we may say it is loftiest in the Greek, richest in the Italian,* and most spiritual in the Gothic,† this relative perfection we designate a School.

The student of art who has been inducted into the theory which forms the groundwork of any one of those *schools*, and who has become so conversant with its productions that he perceives the harmony and the animating beauty which runs through the least as well as the greatest of its works, becomes exclusively attached to that particular style. Hence the partisanship, and the repudiating of every thing out of the sphere in which the student or the artist of whom we speak has educated himself: hence, in a great measure, the revival of Early English church decoration now advancing with so much spirit.

Such an artist becomes a pedant. He does not see that the excellencies of his favourite style are admirable by virtue of their true expression of Nature; but he places the authority of the art already fulfilled before that of the great original from which it was drawn, and which offers to him a field as exhaustless as it did to the artist-workman he so much venerates—provided he studies it with the same simplicity of purpose.

Not only, then, by a knowledge of what has been done will a decorative artist be made, he must, by going to nature even like his brother the pictorial artist, come to his work with fresh feelings and fresh ideas, transferring the evolutions and varieties of form and colour, knowing from actual observation more than from the lessons of science.

* By *Italian* we would here mean the excessive enrichment of figure and colour, which has been called, from the places where its remains were found at the time of the *renaissance*, Grotesque, and which has been repeated in modern times by the school of Raphael.

† The term *Gothic* has been, by the vote of the modern architect, nearly abandoned: we have however used it, and may use it, instead of *Pointed*, because we do not wish to confine it to the architectural, and instead of *Christian*, that distinctive having something of a party sound about it.

But this is, so to speak, the rare man, the DESIGNER or inventor of new combinations,—one to whom genius is requisite, and to him, even more than to any other, is it absolutely necessary to be acquainted with the various styles which have prevailed. Without this, genius itself is apt to verge towards empiricism, and more especially in a field where so much is arbitrary. Some individuals may be found jejune enough to advocate the exclusive study of nature, forgetting how much is required to understand her, how much insight is necessary to distinguish her true features. The very infinity of nature confounds the unarmed student. He must know what to avoid as well as what to adopt; nor is the lively feeling which perceives and appreciates the graceful and the beautiful enough,—he must be also able to say in what these qualities consist, to assign to them their technical reason, and, above all, to point out to what precise decorative *use* they are most properly applicable.

Some forms in nature are, indeed, in themselves so perfectly graceful that the difficulty would be to misuse them so as to deprive them of their pleasing impression.

Fig. 1.

The convolvulus is one of those objects thus happily presented to the observation of the artist; and the above use of it is one of the most pleasing, because one of the most simple we have seen. It is in Beauvais ware, the modest russet colour satisfying the fastidious sense of enlightened taste, which requires that decoration should not be imitative in form and colour at once. The uneducated imitator of nature would not be contented to give the plant in relief, he would add colour, and by thus depriving it of the *perfection* which it at present possesses by virtue of fulfilling all that is attempted, destroy its pleasingness by making an ineffectual attempt at deception. Thus, it would become positively disagreeable if the vase were used for holding real flowers, which would afford an immediate comparison with the imitation.

Such an object as the convolvulus can also be directly applied, and that independently of any other decorative accessories, conventional or otherwise: liable of course to the law of proportion, and to the requirements of the material and the uses to which the article manufactured is to be put. But it is rarely the situation of the ornamentist to be so freely placed, and that principally in textile patterns, when this freedom has unfortunately been principally instrumental in producing a no-meaning and mixed variety of kaleidoscope and contrast-colour designs, (if indeed worthy of the name,) to satisfy the continual change of fashion.

We have thus felt it necessary in this early stage of our remarks to point towards the great archetype of all art, and to distinguish between it and those adaptations more or less bearing reference to the original; not, it will readily be believed, to undervalue the latter, but on the contrary that we may, without any danger of being misunderstood, the better insist on the great importance of a knowledge of *authorities*. The greatest men have willingly been copyists in reproducing the architecture and decorations of the Greeks; and in nearly every piece of work that an artist-workman may be called upon to do, he will labour in connection with others in subordination to a general plan. Thus the plasterer and wood carver must assist the architect,—cornices, panels, &c., must be in keeping with the large features of the building; and the house painter, and, lastly, the upholsterer, follow each other not as rivals, or as independent sovereigns, but as labourers in the same vineyard. In any other way the one will necessarily negative the other, and if they did not, good taste would reject separate beauties placed together without accord—individual parts, however pleasing, productive of a discordant *tout ensemble*. That a contrary course to what we point out has been hitherto followed is well known, and is to be attributed mainly to the want of knowledge of the leading features of styles, and to ignorance of their details. This paramount importance of subordination in the various parts of a whole, is so necessary as even to regulate the sentiment and manner of the effects of the highest art; and one important quality *fresco* painting possesses over *oil*, is, that the comparative weakness in *depth of shadow* of which fresco is capable, prevents it, when justly understood, from giving deceptive transcripts of nature, and by depths and distances violating the architectural integrity of the room or hall it may adorn. Painted in the one medium, the wall would remain sensibly a flat surface; in the other, the vain-gloriousness of modern oil painting would attempt to realize the architecturally incongruous ideas of actual scenes and actual skies.

How much, then, the accomplished workman, able to assist in working out harmoniously the ideas of the master, not to speak of designing himself,—how much he has to learn!

We have remarked the simplicity and unity of the *idea* pervading the contemporary works of the past ages. Down to the time of the highest elevation of modern art this was the case; from the earliest times, to the age immediately preceding that of the greatest men of modern times, Michael Angelo, Da Vinci, Raphael,—or perhaps we ought to say, till the age that followed them, just as we consider these and their directors, Leo and others, the active or passive agents in the change. From that time there has been much degradation in the application of art to the every day uses and enjoyments of life. In England, the Pointed architecture was completing its latest triumphs in the form of the Perpendicular; Henry VII.'s Chapel, and the Royal Chapel of St. George at Windsor, were rising; and the reformation of the faith had paved the way for the total abandonment of Gothic decoration, and the substitution, when classic authorities were more studied, of Palladian, and more lately of Greek transcripts,—an importation which the church-building party of the present day do not hesitate to stigmatize as Pagan. At the present day every style contends for the mastery, and in our manufactures every variety is encouraged, nor can we identify any one as national. The ornamental sculptor, the wood carver, the house decorator, the glass painter, the designer for iron and brass as well as for silks and cottons, all these are called upon to assist in the production of articles in all styles, from the classic to the geometrical and merely arbitrary, through the Gothic in all its periods—not, it is to be feared, omitting the "cabinet-makers' Gothic,"—and the Revival in all its national varieties of Italian, French, &c.

This, it must be acknowledged, is a sphere wide enough for the ambition of the artist or critic either to discuss or to practise; and which a work like the present may be contented to assist in describing, without laying claim to having exhausted. How beautiful many of these styles are, and how interesting the study of the change and progression of ornament as influenced by the moral conditions of the times! In embarking on the study of the more popular and widely diffused applications and forms of art, we enter into the social life of the past, perhaps even more intimately than by contemplating the higher efforts of fine art. Fantastic ironwork, for hinges and door latches,—silver and earthenware, encircled with legends and heraldry,—the designs of cloth of gold and tapestry,—the diapers on glass and the tracery in stone,—all bring us vividly into the presence of the times that produced them. If this is the case with articles of a merely curious kind principally valuable to the antiquarian, it is not the less so when we find, as in the great epochs, certain absolute beauties, and such expertness of execution, as instructs and refines the taste, as well as furnishes with principles and science.

II.

WE shall now come to the History of Design. Not to spend more time than the limitation of this Essay may conveniently allow, it will yet be expedient to review the first appearance of art in the ancient world, as in them we trace the germ of what has followed, and attain the knowledge necessary to classify and view clearly the varieties of later usage.

Even the savage constructs,—uses the means which Nature throws in his way to protect and defend himself, and also to aggrandize his being, by beautiful images and pleasing associations. He fashions vessels, tools, and weapons,—vessels wherein to seethe

the flesh of the kid, and in which to collect the fruits of the earth, —tools to facilitate labour,—weapons to subjugate the stronger and swifter animals. Perhaps the grandest invention the world has yet seen was the first flame from burning wood. To what did it not lead? Climate was by it subjugated, and a power placed in the hand of man whereby the future arts became possible.

Immediately on this invention—now fabulous in its antiquity—he made advancement. Not content with the regency of the things he sees, he digs into the dead clay and extricates the brass and iron,—the instruments of infinite new wonders. Nor defensive only; but obeying the second great law of our being, he goes forth to conquer, not the inferior brute alone, but evil in every form, and brother savages become contending heroes. And here, at this early stage of society, as it appears to us, that condition of man which we now call the *artist* begins to manifest itself: Tubal Cain and Jubal Cain were brothers—the worker in iron, and the player upon the lyre.

As long as the cup has the single purpose of containing, or the sword only that of destroying, the fig-leaves or wolf-skin only that of sheltering, these appliances belong to the senses. Thus contented man may go on for centuries, emerging into systematic social life, the stronger ruling the weaker,—a mutual bond of law or force being established, aggrandizing himself in various ways, (as the early Romans compared to the other ancient nations may be said to have done,)—and yet man the artist, throughout all the means employed to attain these selfisms, may nowhere find his place.

But our instruction is seldom of that kind. The human mind looks upward as well as around,—having and holding is not enough, —nay, it never was anything but as a means. A new motive—and yet it is the oldest of all motives, but new in action—comes into force: he hopes to answer the innate desire for the perfect, by realizing to himself beauties. This the entire history of art illustrates—that he must advance spiritually as well as bodily. Heaven is beyond all, and thither tend we. Beauty, as the symbol of good, it is his desire to create; and this desire, in however rude a form exhibited, being an obedience to a true intellectual motive, is true art-work. No sooner has this been felt, than it rays out and alters the whole face of the world to him. It is neither the bare hatchet nor the string of beads he must have, but both in one. Every endeavour is twofold. *All that we love we decorate,—decoration is, indeed, a kind of manual worship.* Whatever we conceive, we endeavour to give utterance to,—to clothe in suitable form; that we may communicate to all, that the eyes of all may see, and the *beautiful* be affirmed. Thus Art becomes at once the interpreter and the superior of nature; it aggrandizes the good and true as well as the potential; and is it not the religion of God in the world, teaching the worship of that only which is the highest? "For it serveth and conferreth to magnanimity," as Bacon says, "morality, and delectation; and thence it was ever thought to have some participation of divineness, because it doth raise and erect the mind, whereas reason doth bow the mind to the nature of things."

In reviewing the arts of the ancient world, it may not be necessary to go further than Greece, except by way of comparison with the works of that favoured land. The works of Homer scarcely contain anything of importance on the arts of design, at least on that of painting. This is the more remarkable, as he speaks of rich and elaborate embroidery as not uncommon; on the splendid diplax of Helen were worked many battles of the Greeks and Trojans, fought on her account. This embroidery is actual painting in principle, and is a species of painting in practice; and it was considered such by the Romans, who termed it "*pictura textilis.*" The famous description of the shield of Achilles, worked by Vulcan in divers coloured metals, satisfactorily establishes the fact that the plastic art must have attained a considerable degree of development in the time of Homer; and therefore determines also the existence of the art of design, the *ars delineandis.**

The art of the sculptor has been considered more ancient than that of painting; and although they are the same fundamentally, the priority of the imitation of nature, by means of a solid body and plastic material, may be readily granted. There are few tribes, however savage, who have not some kind of images; but the existence of drawing on flat surfaces is very rare among unenlightened nations. The first use of imitative art would most probably be in connection with architecture; in expressing the purposes of the building or in decorating it. The earliest remains of art that have come down to us are of this character, forming the capitals of pillars and the friezes above them. The combination of colour with sculpture was, however, undoubtedly the earliest mode of representing life; and it is becoming generally admitted, that the buildings, and also the statues of the Greeks, in the highest ages of art, were heightened and enlivened by colour. But simple *colouring*, and *painting*, strictly speaking, are quite distinct. The colouring of the early wooden images—the *Daidala*, &c.—must have certainly preceded any important essays in painting, or the representation of forms upon an even surface by means of colour, or light and shade. But this was no stage in the art of painting, and these figures were most probably coloured by the artists who made them. "The first temples," says Sir Christopher Wren, "were in all probability, in the ruder times, only little cells to enclose the idol within, with no other light than a large door to discover it to the people when the priest thought proper, and when he went in alone to offer incense, the people paying adoration without, for all sacrifices were performed in the open air, before the front of the temple; but in the southern climates a grove was necessary, not only to shield the devout, but from the darkness of the place to strike some terror in their approaches, therefore trees were always an adjunct to the cells; but trees decaying with time, or not equally growing, (although planted at first in good order,) or probably not having room, when the temples were brought into cities, the like walks were represented by stone columns, supporting the more durable shade of a roof, instead of the arbour of spreading boughs; and still in the ornaments of stone-work was imitated, as well as the materials would admit, both in the capital friezes and mouldings, a foliage, a sort of work composed of leaves, which remains to this age."

This which is said of the antique is true of the architecture of all the world: the pillar has ever maintained its character of a supporting tree, and in the Norman capitals as well as the Egyptian the leaves or flowers are given. In this historic truth do we discover a fundamental principle in decorative art,—that, as it originates in symbol, it ought to be always allied in meaning to the object which it decorates. When these architectural proportions became settled by science, the decorative parts were fixed by convention; they retained their degree of significance, and became parts of a whole not to be altered. Nothing was there merely because it was handsome; the skull, with its fillets and wreath, which our imitative architecture still repeats, are doubtless the representatives of the bones and trophies of the ruder fabric.

Fig. 2.

So also with the altars, the flowers which garlanded them in festive days became their permanent ornaments.

Fig. 3.

The story of the acanthus may, indeed, be quoted as an instance of actual *invention* in decoration being introduced on fixed architectural proportions, but the tale is wholly doubtful; and if true, only concerns the introduction into ornament of the particular plant which afterwards became so beautiful in classic art.

In many of the eastern temples, as in the Egyptian, we find this foliated character of capital in great variety, and productive of great beauty. Although the shaft of the pillar is short, seldom more than five diameters, while the Corinthian rises to nine, the stunted effect is obviated by the variety of form. As if formed by

* Article 'Painting' in the 'Dictionary of Greek and Roman Antiquities,' by R. N. Wornum. We have quoted elsewhere from this admirable paper.

binding together a mass of growing stems, the column bulges from the base, and what in the Doric became *flutes* we see in the Egyptian as *raised*, giving the whole the appearance of a bundle of rods firmly bound at the top, from which binding the leaf or flower bending itself out forms the capital. The palm leaf* and the lotus, doubtless from religious associations, afforded the principal plants thus used.

Fig. 4.

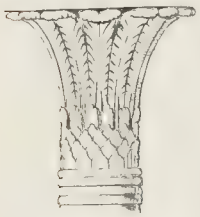
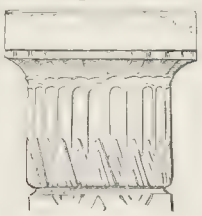


Fig. 5

In the subterraneous chamber at Mycenæ —which is perhaps the most ancient piece of Greek art remaining—we see a similar treatment. Mycenæ, with Sicyon,† Argos, &c., were towns said to have been built by the Cyclops. They now present only piles of huge rough stones with portions of plain colossal masonry. The pillars at the entrance to the chamber at Mycenæ present a character wholly distinct from, and prior to the orders of the Greek. The character of the capital is much nearer the Egyptian: but instead

Fig 6.



of the flower being naturally expressed, we find it becoming restricted and formalized. In the future practice of the Greeks this formalization became complete, any representation of an original natural object in the Ionic, Doric, &c., is lost; proportion alone is their beauty; till in the Corinthian we again find the pleasant hand of the artist, and in connection with a new object, the *acanthus* plant, much more capable of rich and varied treatment than the lotus or the palm.

Although the earliest movements of the arts of sculpture and painting are thus illustrated in their subservience to architecture, it is only because the size and solidity of temples have made them more durable than isolated and moveable productions of the sister arts. Doubtless the first motives of all arts are the same, and yet independent of each other. The idol must have been at least coeval with the temple, and the picture in its first form of hieroglyphic writing may have an equal or earlier antiquity. The common method of sculpture pursued by the Egyptians, was hollowing out or engraving the object, relief sculpture nowhere occurs in their works: this is indeed the great distinguishing feature of Egyptian art. Here, as in India, the law of the son inheriting his father's caste and trade, disallowed innovation: conservatism became the first instead of the second political motive, and while the arts were maintained they were prevented from advancing. How different from the spirit of the Athenians, which, rising out of the rigid commencement, went onward with accelerated power, like the grand chariot-race of the Olympic, onward and true to the goal, till it reached the idea of the perfect!

In the remains of Persepolis we find relief-sculpture, but subject to a restriction analogous to that of the intaglio or engraved method of the hieroglyphics. The figure is indeed elevated from the surrounding surface, but it is all equally so: the surface of the figure being flat, and the degree of elevation it possesses being sudden and confined to the outline. Thus, where the arm of a figure crosses the body, it is scarcely if at all higher, but is expressed by an indented outline. In the early works of the Greeks we find a similar mode, but not to that extent; not apparently recognised as a principle, but only done by the imperfectness of the workman. In the invaluable marbles, lately added to the British Museum by Mr. Fellows, we see distinctly marked three stages of the art:—the first approaching this uniform and primitive style; the second freely endeavouring to express varied action and form; and the third, instinct with true beauty above all difficulty, exhibiting the most perfect mould of the female form enveloped in lucid draperies driven behind by the wind,—a creation like the marbles of the Parthenon quite beyond common criticism,—such as makes the artist who can appreciate it breathless with admiration.

The statues made by the great artist Dædalus and by Endæus were of wood; metal was also used for various purposes of sculpture in the most ancient times, as we learn from Homer, Hesiod, and Plutarch. Diapænis, and Scyllis the Creton, were celebrated for their marble statues about 776 years before Christ.

During the 250 years which elapsed between these artists and the age of Phidias, the art made a slow but considerable advance. Gradually the extreme wirey sharpness of execution relaxed, the hair was less artificially curled, and the draperies gained more freedom and variety. The characteristic of smoothness, finish, and regularity of the parts, as in the locks of the hair and beard, which were represented like a series of knobs, and in the drapery which hung down in zigzags repeated with the greatest exactness, is the most prominent in the early works, and it is to be supposed that this was not entirely the result of inability, but rather of an appreciation of *regularity* as a decorative element.

Of the immense importance of the arts in the great period of classic refinement, it is impossible to read without wonder and a degree of doubt as to the verity of the records. If, however, evidence is to convince us, we must at last abandon this feeling, and, in comparing the ancient with the modern world, acknowledge that art was diffused and general with them, and that it is narrow and exclusive with us,—that it formed part of their highest glory and greatest enjoyment, while with us it is neither,—that with them the realization of beauty was a religion and a vital necessity, with us it is only what we call a gratification of taste.

It has been thought that the majority of the ancient statues were of bronze, but Flaxman considers this not to have been the case, and that marble was the general material. The working of metals was undoubtedly early brought to great perfection by the Greeks, although it does not appear that the great cities were so skilled in this work as some of the lesser. Sicyon was long the workshop of metals, Ægina was famous for bronzes, continuing, according to Pliny, the Egyptian manner. The Sicilians, who were Grecian colonists, and also the Etruscans, were skilled in metals, but the greatest schools of antiquity were unquestionably Athens and Rhodes. From this island, only 40 miles long and 13 broad, the Roman conquerors carried off 3,000 statues,-and the remains of the world's wonder, the brazen Colossus, which lay there till the conquest by the Saracens in 684 of the Christian era, was sufficient, when reduced to pieces, and sold to a Jew merchant, to load more than 900 camels with the metal!‡

Design, as we have said, being the basis of both plastic and linear arts,—of painting as of sculpture,—we find records of painting in the earliest architectural and sculptural monuments yet discovered, in the tombs of Etruria as in those of Hindostan and Egypt. Contemporary with the sculptors already mentioned, the earliest whose names have been recorded, namely Dipaenis and Scyllis the Cretan, we find the advanced state of painting in Asia Minor evidenced by an anecdote in Pliny. The picture of the Battle of the Magnetes by Bularchus was purchased by the King of Lydia for as much gold coin as would cover the picture.

As in sculpture, the first efforts were figures whose limbs were undivided from the body, so in drawing, the first form in which we find it is that of a simple line circumscribing the body or figure

* In one of the smaller London theatres there is a very fanciful use of the palm tree. The four pillars, two on each side of the stage, are notched like the stem of the palm, and at the top spread widely out towards each other, nearly meeting. In a new shop-front in Regent-street there is also a similar adaptation.

† The most beautiful of the traditionary stories of the invention of painting is related of a potter's daughter of Sicyon. Her lover being about to leave her on a long journey, she outlined the shadow of his face on the wall that she might preserve his image.

‡ The art of inlaying and colouring metals is still possessed in perfection by many of the descendants of the nations of Asia Minor and Syria. The Circassians especially pride themselves on colouring silver, —an art in which, in ancient times, the Egyptians excelled, though it was practised by the artists of Tyre and Sidon.—Lady Calcott.

represented. This was termed by the ancients a *skiagram*, instances of which are familiar to us in the Egyptian manuscripts, from one of which we give the following.

Fig. 7.

When this simple outline is filled in with black, white, or colour, it was called a *monochrom*, or a painting of one colour. Of this kind are the silhouettes or black profiles which have been so largely in use, from their cheapness and readiness of execution, since the time of Lavator. The next step was the *monogram*, in which all the parts of the form within the outline were indicated, such as we generally find on the ancient vases, or such as the designs of Flaxman, which are perfect monograms.

Fig. 8.

These outlines were most probably originally practised upon a white ground; for Pliny remarks, that they were first coloured by Cleophantus, who used "testa trita," by which we should perhaps understand that he was the first to draw them on a red or coloured ground such as that of the vases.*

The next step was the more perfect form of the monochrom alluded to above; in this light and shade were introduced. These "monochromata" were practised in all times and by the greatest masters; and resembled the *chiaroscuri* of the Italians. Of this art some specimens were found in Herculaneum, painted with red on white and black.

So far each of these steps is clearly defined, and may be considered as, so far, a kind of independent art. Indeed, each of the three methods enumerated has remained throughout the whole practice of art, and is still in use. The last mentioned is one of the most beautiful styles of interior decoration; and *chiaroscuro*, with the addition of gilding, is capable of producing some of the finest decorative effects.

The next and last essential step towards the full development of the art of Painting, was the proper application of local colours in accordance with nature. This is, however, quite a distinct process from the simple application of a variety of colours without light and shade,—a mode of painting which is simply polychromy; and a picture of this latter description is a much more simple effort than the rudest forms of the monochrom in chiaroscuro. But the addition of local colours to a picture already possessing light and shade, is the completion of the art of painting.

Fully alive to all the elating and exhilarating influence of colour, the ancients employed it in every thing. The colouring of architecture seems to have been universal,—traces of colour are found on most of the architectural remains of Greece, and on those of Italy and Sicily. But with the exception of the Doric ruins at Corinth, and the temple of Ægina, which are not of marble, the colouring was confined to the mouldings and other ornaments, the friezes, the metopes, and the tympana of the pediments. The columns and walls of the buildings we have mentioned were coloured as well as the other parts; but when the walls were of marble, they seem to have been left in their native state. From the traces on ancient monuments, we are enabled to form a very tolerable idea of the ancient system of decorating buildings. They were painted in various ways, and in a variety of colours; and a tasteful combination of colours must have added greatly to the effect of even the richest mouldings. The ordinary decorations were foliage, ova, and beads: but upon the larger mouldings on which foliage was painted, the outlines of the leaves were engraved on the stone. Gilding and metal work were also introduced. The architrave of the Parthenon at Athens was decorated with gilded shields. Friezes adorned with sculpture appear to have been invariably painted, as also the tympana; in the Parthenon these parts were of pale blue. With the Romans this love of colour degenerated into a mere taste for gaudiness. The assemblage of works of art in the capital of the world, must have induced the necessity of a very high pitch of brilliancy to minister to the highly excited eye. As the Roman architecture became more and more varied and overlaid with ornament, so the decoration by colour became more and more glaring and dependent upon contrasts. Sphynxes and obelisks from Egypt, works of sculpture from all the conquered countries, to the number of 14,000, adorned the streets. Greece became a Roman province, and the great productions of art being carried off by the conquerors, the artists following, finding a better market for their talents than in their native country. Rome, therefore, and the towns of Southern Italy, were filled with colonies of artists, who willingly spent their time in adorning those baths and villas, where a refined taste, the offspring of luxury and leisure, seemed to palliate vice. How different were the purposes for which the masterpieces of art had been conceived!

Vitruvius deplores the corrupt taste of his time, observing that the true decorations of the ancients were laid aside, and that strong and gaudy colouring and prodigality were substituted for the beautiful effects produced by skill. Pompeii, with much that is chaste and beautiful, has many traces also of what Pliny and Vitruvius complain of. The work by Zahn affords us examples of this, but without colour an illustration would scarcely convey any adequate idea to the reader. Vitruvius contrasts the state of decorative painting in his own age with what it was formerly, and he enumerates the various kinds of wall-painting in use among the ancients. They first imitated the arrangement and varieties of slabs of marble, then the variegated frames and cornices of panels, to which were afterwards added architectural decorations; and, finally, tragic, comic, and satiric scenes, and in the long galleries and corridors, various kinds of landscapes, or even subjects from the poets and the higher walk of History. But these things were in the time of Vitruvius tastelessly laid aside, and had given place to mere display, and the most fantastic, mixed, and unmeaning inventions. The paintings on the grottoes which were exhumed about the time of the revival of the arts in Italy, are by many considered liable to this depreciatory criticism, although they have furnished the originals for the decorations of the Vatican by Raphael and his scholars.

In manners and in luxury, as in art, the Roman character degenerated fearfully from the Greek. The feasts of the Athenians were accompanied by an elevation of refinement which had no part in the orgies and shows of the Romans.† The *second period* of Roman art brings us down to the time of Diocletian, comprehending the first three centuries of the Christian era. At the beginning of this time we first find portrait painters as a distinct class, landscape painting was first attempted, and the first persons who seemed to have illustrated books appear to have been Varro and Atticus. In their noble libraries they inserted small portraits of the authors at the head of their works. So diligent was Varro that he published a collection of 700 portraits of eminent men.

What has been called the *third period* of Roman art commences with the foundation of Constantinople, and exhibits a total change in the style and purposes of the arts of design. The establishment of Christianity, the division of the empire and the incursions of barbarians, were the first great causes of this important revolution; but it was reserved for the fanatic fury of the Iconoclasts effectually to destroy all traces of the former splendour. These image-breakers raised so effectual an outcry against the respect paid to pictures, images, and adornments, that the popular fury precipitated itself with fatal effect on much of the art which lavishly adorned the new capital of the world.

The elevation of the Christian faith, and the total change which followed on the intellectual as well as moral condition of the world, must now be considered the ruling idea, both in the decay of the ancient taste and in the rise of the northern genius. Polytheism, with all its sculptured family of gods and goddesses, for a time maintained a strange intercourse with the new faith. Some of the Roman emperors placed statues of Abraham, Moses, and Christ, among those of the lawgivers and benefactors of the heathen ages. Severus, for example, whose mother Mammæa had been so charmed by the eloquence of Origen that she inspired her son with favour

* Article 'Painting,' 'Greek and Roman Antiquities,' before quoted.

† Among the Greeks commerce was mostly confined to reciprocal relations between the states. Fish from Sicyon, eels from Bœotia, cheese from Sicily, wine of Phlius, perfumes from Athens, were among the items of a great banquet; we hear also of pipers from Ægium, cooks from Elis, *tapestry from Corinth, and a caldron from Argos.*

for the Christians, placed the statue of Christ and some of the patriarchs among his household gods. But this was of course only the first ignorance of the half-converted,—the genius of the old and of the new faith could never be the same. They were wholly opposed to each other; and the classic mythology, with all its poetic accessaries, and the grand art which raised men to a level with the immortals, was desecrated, abandoned, and lost, to be for a thousand years unknown, while a fabric of Gothic art, fitly expressing the new faith as the Parthenon did that of the past, rose, arch over arch, and pinnacles pointing up to heaven. We must now, following the course of the evangelizing missionaries, leave the classic regions of Italy and Greece, for latitudes nearer our own.

Before doing so, however, it is necessary to point out the origin about this time—that is to say, cotemporary with the Byzantine, and rather earlier than the appearance of Gothic form of building or style of decoration—of another and very distinct species of ornament.

The second commandment in the decalogue, as many of our readers may be aware, was understood by the Jews as a literal injunction against the making of any graven image, or any likeness of any living thing whatever. This is still the case among the strict Hebrews. At first the judaizing Christians might perhaps adhere strictly to this interpretation, but fortunately not for any length of time. In the Koran, however, this anathema against the imitative arts is repeated, and all Mahomedans repudiate* to this day the introduction of men, beasts, or even plants, in their decoration.

Consequently, when the followers of the prophet became princes, and when mosques and minarets, palaces and baths, were built by them, and embellished to meet the luxurious taste of the arbitrary possessors, a style of ornament grew out of the strict avoidance of all intelligible figure. As to the Jews, it does not appear that they ever possessed a school of geometry any more than a school of art; but not so the Arabs,—in the first centuries of the Hegira mathematics were learnedly pursued by them. Accordingly, Moorish ornament† was founded on geometry, and presents as many beauties as mosaic can convey. In the work by M. Henemer, 'Arabische und Alt. Italienische. Bau Verzierungen,' there is an immense variety of these ornaments, generally in two or three colours, very delicately harmonized, principally taken from examples in Cairo, the originals being pavements, roofs, and borders.

This design, however chaste, it will be easily seen, was very limited, and we find somewhat later a much freer enrichment added to it. Although still avoiding all representation of natural objects, this later style—the style of the Alhambra—exhibits as splendid arrangements of decoration as any that have ever appeared. The colouring was equally rich with the design; not an inch of wall was left uncovered, and nothing can exceed the splendour of these waving and intersecting forms, sometimes given with gold on a crimson ground, at others with crimson on blue picked out with white. Several pages are given in the present work selected from the walls of the great palace of the Moors in Spain, and also several vases of French manufacture in the Moorish taste.

III.

"To endeavour to trace the history of any one of the fine arts, through the period which elapsed from its decline in the antique world to its revival among the moderns," says Lady Calcott, in the last of her 'Essays towards a History of Painting,' "is a task not much more promising than that of finding the boundary lines, and ancient landmarks of a country which has been laid waste by the waters of a flood, or covered by the lava from a volcano." Fortunately it is not necessary for our present purpose to trace the uncertain origin of things, or to do more than indicate, in passing, the transition forms of art of the middle ages. The architecture of the ancients cannot be said to have been really superseded by any style which can be considered Christian, in the South. Nor was it likely such would be the case, from the beauty of the existing remains with which Italy was scattered, notwithstanding the devastation of the northern tribes. At the same time, the variety of Byzantine decoration exhibited in capitals and other ornamented portions of church architecture scattered over Europe, is so great as to preclude any particular criticism. Some specimens of these retain the classic foliage, others are purely arbitrary, and unlike every thing either that had gone before or that was to follow, while a considerable portion are closely allied to the Norman, which was now making its earliest and most vigorous efforts. The Byzantine was an ineffectual effort to give a purely ecclesiastical tone to Christian places of worship, struggling as it did against the ancient architecture, so beautiful, and yet so peculiarly *heathen* in its details. It rather grew out of established forms than originated a new style; and it still retained too much of the character of the orders devoted to past usages."

"But there arose in the west,"—we quote from an excellent little work by the Rev. G. A. Poole,‡—"in the middle ages, or the dark ages, as we complacently call them,—a style of architecture growing, in all its parts and characters, out of the wants of the Church; and adapting itself to the expression of the very things which she desires to express, in all her methods of embodying herself to the eyes of the world, and to the hearts of her sons. And so entirely did this style arise out of the strivings of the Church to give a bodily form to her teaching, that it seems to have clothed her spirit, almost as if the invisible things had put forth their energies unseen, but powerful and plastic, and gathered around them on all sides the very forms and figures which might best serve to embody them to the eye of sense. A Gothic church, in its perfection, is an exposition of the distinctive doctrines of Christianity, clothed upon with a material form; and is, as Coleridge has more forcibly expressed it, 'the petrifaction of our religion;' or as it has been expressed by a mind essentially differing from Coleridge's—which makes the coincidence the more remarkable—'The divine order and economy of the one seems to be emblematically set forth by the just, plain, and majestic architecture of the other; and as the one consists of a great variety of parts united in the same regular design, according to the truest art and most exact proportion, so the other contains a decent subordination of members, various sacred institutions, sublime doctrines, and solid precepts of morality, digested into the same design, and with an admirable concurrence tending to one view,—the happiness and exaltation of human nature.'

"Such, then, is Gothic architecture:—theological, ecclesiastical, and mystical, in all its parts and characters. It grew to its perfection, both in general design and in more minute details of ornament and execution, during many successive generations: and although we have few churches entire and unmixed of its earliest forms, we have remains, more or less perfect, of almost every variation in its style, from the Norman of the twelfth century to the elaborate perpendicular of the Tudors."

The first Christian temples, it appears, were built in the form of a ship,§ that being the emblem of the church, and divided into three parts,—the Narthex or Porch, for penitents and catechumens; the Nave for communicants; and, lastly, the Sanctuary, or Chancel, for the clergy and the altar. The apsis, or end of the chancel, which always looked towards the east, as is strictly the custom with all our English churches, was circular; and Eusebius tells us that Constantine encircled the apsis of the church of the Holy Cross with twelve pillars, according to the number of the Holy Apostles. Along the floor of these early churches the figure of a cross was expressed by a different coloured tile or stone from the rest of the pavement. The Cross is the ground form of the Gothic church, and throughout all its parts, even down to the most minute, string-courses or foliage, in which trefoil plants are generally represented, are shadowed out the great Christian verities, the Trinity and the Atonement. The Atonement is expressed by the general form of the whole, the cross; and, in some instances, as at Wells, Salisbury, Lincoln, and York, we have the smaller transept above the great arms of the cross, representing‖ the inscription placed by Pilate over the head of our Saviour. To signify the Trinity, we have, first of all, the threefold division, lengthwise, into nave, transepts, and choir; the threefold division, breadthwise, of the nave or choir, and the two aisles; and the same in elevation, described by the arches separating the nave from the aisles, the triforium, and the clerestory. The two western towers and central tower are also expressive of the same.

Having now reached our own country, before following the architecture, which we must do very briefly, it is just to our Saxon

* The portrait of the Sultan, which Sir D. Wilkie painted at Constantinople, was said to be the first portrait painted of a descendant of the prophet.

† It is not uncommon to apply the term Arabesque to the Italian decoration—that of the Vatican, &c.—the legitimate offspring of the ancient (grotesque) style found in Pompeii, &c., of which we have spoken: but this is a merely arbitrary use of the term.

‡ 'Churches, their Structure, Arrangement, and Decoration.' Published by T. Burns, Portman Street.

§ Hence our English *Nave*, from the Latin *Navis*.

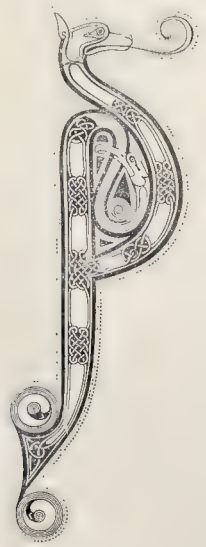
‖ There is, besides, in some churches, a remarkable formation, which is doubtless intended to represent the inclination of our Lord's head as he hung upon the cross. The choir, or chancel, has a slight but perceptible inclination from the line of the nave. It is very remarkable in Lichfield cathedral, and in the churches of St. Michael, Coventry, Patrington, Holderness, and many others.

ancestors to go back to their times for a little. Bede mentions several churches of stone of admirable workmanship, built before the arrival of Hengist; and Matthew of Westminster relates that the churches of Britain were repaired by Aurelius Ambrosius in 448. A century and a half after this date, St. Augustine was in this country; and in the church-building carried on by the converted kings of the heptarchy, we find constant allusion made to the foreign artists, as in the case of Wilfrid of York, and Benedict Biscop. Both of these exerted an influence on the arts of painting and illuminating, as well as on architecture; they took many journeys to Rome, and brought back many pictures, books, and images, and also skilful builders and artificers from Rome, France, and elsewhere. Of the churches so built, we are told that they had many rooms of smooth stone, and a large room supported on many columns. *The windows were glazed by glass makers from Gaul,* and the capitals and ceiling of the sanctuary were decorated with histories, and curious figures projecting from the stone.

The pictures brought into this country by Biscop, 680, are, as we may suppose, all scriptural,—a Virgin, portraits of the twelve Apostles, and, what is more curious among the many others, some subjects from the Apocalypse, executed with "marvellous art and wisdom." These pictures must of course have been of Byzantine execution, and their exposure in the Saxon churches doubtless exerted a great influence on the illuminators now beginning their work in England.*

The great school of learning at this period, and for centuries before, was Ireland. Among the arts thus early known there, that of illuminating is said to have been taught and practised as early as the fourth century; and being conveyed from thence with other branches of learning, was established soon after the Saxon conversion in many places in England. Ethric and Wulfric, monks of Hyde Abbey, are recorded with the additional honorary designation of "painters" to their names. Here also the monk Godewin illuminated the Benedictional of St. Ethelwold. This Hyde Abbey indeed, or "new minster at Winchester," is considered to have been a principal school of the art in England. The most wonderful specimen, however, of Saxon painting is in the book called the Durham Gospels, which is of the Irish character. "The chief features of the Irish or Hiberno-Saxon school of illumination, were extreme intricacy of pattern, interlacing of knots in a diagonal or square form, sometimes interwoven with animals, and terminations in heads of serpents or birds. The Lombardic or Visi-Gothic MSS., on the other hand, had tesselated or embroidered ornaments for the capitals."† We give a specimen from the Durham Book.

Fig. 9.

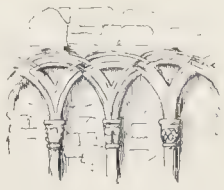


We fondly attribute much in our laws to Alfred which had no existence until centuries after. But his love of letters and arts is not conjectural. At a time when the judge and thane at home, as well as the berserkir abroad, needed the implacable vigilance of the sword and the axe, he compelled all—Earls, Governors, Ministers—to learn the arts of letters, or lose their preferments. The extremely old or desperately stupid might have a dispensation granted on condition of a kinsman, freeman, or serf, being constantly employed, "day and night," in reciting to them. The king himself founded churches, translated much into the native tongue, and the "*time-candles*," which, being swayed about by the wind, "through the chinks in the king's wall," told the hour untruly, he enclosed in a horn case, and so invented the lanthorn. Artificers and artists he invited from Germany and France. Working in metals was carried to a high perfection in the subsequent Saxon ages, as we find from the testimony of the conqueror's chaplain. "When William returned to Normandy, he gave away many presents of golden vases and richly ornamented stuff, which they hung up in their churches on high feast days." He says further—"The English women excel in the use of the needle and in embroidering in gold, the men in every species of elegant workmanship." Embroidery must have been carried to a high degree of perfection indeed, since we hear of ladies working pictures representing the good deeds of their husbands; and that St. Dunstan, at the prayer of a noble dame, painted for her a robe which she afterwards embroidered.

On the entrance of the Norman conquerors, the distinctive features of the Saxon church, which were those of the early churches already alluded to,—the form, that of a parallelogram, with semicircular apse, the windows and doors of the same shape, small, and few,—were superseded by the form of the cross with side-aisles, &c.; and within a few years, no less than five cathedral churches were begun, the arch retaining for some time the round form, and the building somewhat of its sombre and heavy character.

The first appearance of the Pointed arch is found in buildings of Celtic origin, and is formed by placing two large stones in an oblique position, resting on walls at their lower edges and with their other ends united at the top. At the ruins of Jarrow monastery this form of door is seen, and in many other places. Others ascribe its invention to the intersection of two semicircular mouldings on the face of a wall, which forms the pointed arch in the shape of an equilateral triangle with the sides curved. Arcades of many varieties of this figure form ornamental dressings for walls in many of the Norman buildings.

Fig. 10.



The acute or lancet arch appears to have been adopted first of the pointed series, and was immediately applied to every part of the building. Windows and door-ways, but especially the former, exhibit beautiful specimens of this form in combination. Door-ways of wider dimensions we find divided by a central column into two apertures of the lancet shape.

Figs. 11—14.

* The antiquity of altar-pieces and illuminated missals, has been traced conjecturally even to the time of the apostles themselves. At the beginning of the Christian era, missive letters were usually written on tablets of wood hollowed so as to present something of the appearance of a boy's slate in a frame. Two of these were placed face to face to preserve the writing, which was on wax, and a pair of boards thus prepared was called a Dyptic. The Epistles of St. Paul and the other apostles to the primitive churches, were, in fact, missive letters despatched to their distant congregations; and there is every probability that imaginary or real portraits of the writers accompanied the letters, and headed the contents of the Christian dyptics, in order to insure to them the same degree of reverence which was paid to the missives of the government when headed by the imperial effigies.

The compact form of the dyptic suited the purpose of a moveable altar-piece admirably. And the names dyptic or triptic, which implied, at first, but a double or triple page, came with time to designate those folding altar-pieces so frequently found in the earliest Christian churches.—Lady Calcott's Essay.

† Sir F. Maddon's Introduction to Shaw's Specimens of Illum. MSS.

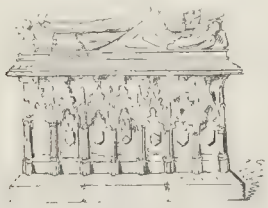
These narrow windows are often, as our examples show them, double, sometimes treble, and often five together—as the five sisters at York—at first without a common head. In the last of these figures is seen the commencement of the infinite variety of form in the upper part of the window, which very shortly became a favourite field for the invention of the builder. From the early part of the thirteenth to that of the sixteenth centuries, the designs of windows are as countless as the variety of the carvings that adorn the capitals of the pillars, and the bosses of brackets and pinnacles, varying from loopholes of six inches wide to openings of 75 feet in height by 24 in width, divided by upright mullions, transoms, and tracery.

The restorations of the Temple Church, Crosby Hall, and other buildings which have gone on so zealously, and which are likely to go forward on a far more extensive scale, have shown us how gorgeous was the effect of the interior decoration of those times. In Durham the capitals of some of the pillars of a plain character are found to have had foliage painted on them, and, in the cleaning of some of the angels' heads in the Temple church, it was discovered that not only had the hair been gilded, and the face painted, but that the eyes had been inlaid with glass.

Everywhere the richest colour prevailed, from the floor which was laid with enamelled tiles, to the roof which was covered with tracery and devices. And now before the magnificence of the Christian temple could be complete, to give its varied forms and grouping of parts their entire charm, the painted window and monumental sculpture were necessary. The earliest stained glass had the devices or figures in the centre part, with borders, in which a deep blue predominated, or mosaic of ruby and blue, but still the blue overpowering the rest. In these conventional representations of saints and bishops the natural colour is not adhered to; the hair, for instance, is frequently blue or green, as the harmony or contrast of colour may dictate. More lately, we find the decorative part as well as the figures much nearer nature, and much more white introduced. Last of all, as in King's College, Cambridge, the window emulated a picture, and the figures crowd the entire space.

The tomb went through as many changes as the church itself. At first, the place of burial was only marked above the pavement by the prismatic or triangular form of the roof of the coffin, as in the tomb of Rufus. It then became decorated, and the entire sarcophagus appeared above the ground, as that of the Archbishop Theobald, at Canterbury, 1161. The third form, of which so many are well known, was that of the effigy on the tomb. This began earlier in Normandy than in England by thirty or forty years, the sculptors being more expert, it may be, but many of them, even among our earliest, are in a noble and severe spirit and large style; exhibiting great beauty of execution, both in portraiture and in the correctness and admirable treatment of the costumes. The fourth form was that of a testoon, or arch, over the tomb: the earlier flat, the later arched and terminating in a gesse or fleur-de-foliage. The fifth mode was by mausolei, or tombs free of the wall, which became very inconvenient from their size and position. The last of the list were the brasses; which have also, like the sculptural effigies, become the truest authorities for the antiquary and the artist. We subjoin an example of the altar tomb—that of one of the greatest architects that England has produced—Bishop William of Wyckham.*

Fig. 15.



The last pure style, and the style which peculiarly belongs to England—the Perpendicular—brings us down to the most eventful epoch of modern history, that of the Reformation. Gothic architecture seemed to have culminated,—to have realized its greatest efforts, and showed a tendency, after all its variety, to degenerate into formality,—when new influences came into the field to put a final period to its changes. The style of the thirteenth century has been considered the complete, or "perfect Gothic," by Messrs. Whewell, Cottingham, and others; and this is the most generally selected by architects of the present day when selection is allowed. The peculiarities of earlier works—those that give them the appellation of Early English, Norman, or "Romanesque"—have been viewed as not fully developed, while the change which began with the first part of the fourteenth century, from its over-abundance of ornament called the "Decorated;" and the succeeding form of the Perpendicular, so called principally from its paneled surfaces throughout, and which, as we have said, finishes the cycle of our architecture, have been denominated "*After Gothics.*"

During this long period, whatever relates to the decorative arts must be found in connection with the church. Little there is out of it that has been recorded of interest, and there is every reason to believe that even the palace and the ladies' chamber were miserably deficient in the tasteful or artistic. The illuminator and the silversmith, indeed, were in full operation, and the specimens of the work of both are highly curious and beautiful. But not only was there no class of men to represent what we call artists—seeing that the architects were priests; but the trades were not seemingly in a very fixed state, one man exercising various callings, although the twelve companies in London were formed by Richard I., and the crafts had their aldermen at an earlier time. When the Earl of Warwick went to the court of France, he contracted with his *tailor* for the *painters'* work that was to be displayed in the pageantry of his journey.

"First, cccc pencils (pennons) bete with the raggidde staffe of silver, pris the pece vd—08,—6—00d.

"Item for the peynting of two *pavys* (shields for the entire body) for my lord, the one with a gryfon stonding in my lordis colours rede, white, and russet, pris of the paveys 00—06—08.

"Item for the other pavys painted with black, and a raggid staffe bete, with silver occupying all the felde, pris 00—03—04.

"Item, one coat for my lordis body, bete with fine gold, pris 01—10—00.

"Item for a grete stremour for the ship of xl yerdis length, and viii yerdis in brede, with a grete bere and griffin holding a raggid staffe poudrid full of raggid staves; and for a grete crosse of St. George for the lymming and pourtraying, 01—06—08."

Barren indeed is the field of art until the end of the wars of the Roses, and at the time when the revival of the arts of painting and sculpture in Italy were producing such works as the doors of the Baptistry of Florence by Ghiberti, which M. Angelo said were worthy of being the gates of paradise, and preparing the way in the next age for the greatest of modern art; while, in Germany, Von Eyck and others were making important inventions, we do not find any corresponding movement at home.

The truth is, that in general civilization we were much behind. How rude our domestic architecture must have been, contemporary with the erection of our great cathedrals, is evinced by the circumstance that chimneys are not understood to be at all older than 1200. "Grates and chimneys," says Whitaker, (History of Whalley, p. 93,) "were beginning to be introduced about 1370."

> "Now hath each riche a rule to eaten by himselfe,
> In a privie *parlur*, for poore men's sake,
> Or *in chamber with a chymney*, and leave the chiefe hall."
> PIERS PLOWMAN.

Coal began to be burned in London as early as Edward I., as we learn from its having been interdicted by him for fear of evil effects from the smoke. The mines at Newcastle were discovered in 1300, and were encouraged by Queen Philippa, who advanced the useful arts in many ways. Cloth was first manufactured in the time of Edward I.; but the queen already named seeing how English wool was carried abroad and brought back woven, established also the weaving of woollen cloths. This manufacture was in considerable quantity in 1331. The illuminations of the court of Richard II. show us highly decorated fashions of dresses and of hangings. The latter must have continued to be so costly, however, as to prevent their general use, being embroidered by hand until the early part of the fourteenth century, when French tapestry was first introduced, having been invented in 1246. This became the staple production of the town in Flanders, which has almost given its own name to the article; and so early as 1398, the celebrated set of "Arras hangings" at Warwick castle are mentioned. Large quantities were imported into England, the first sort consisting of silk with gold threads. This "cloth of gold" was the royal wear, and the idea of magnificence lent to it by the use of the precious metal, maintained it in its place from the time of Richard II., whose cloak is of cloth of gold embroidered with the well-known

* Besides the numerous pages of German Gothic in the present work, the reader will find some rich examples from York and Henry VII.'s Chapel, &c. York was begun about 1230. Henry VII.'s Chapel was finished during the reign of Henry VIII.

S. S. ornament and figures of harts, to Henry VIII., whose portraits by Holbein are profusely gilt. In Chaucer's translation of the Romaunt of the Rose, he makes "Richesse" wear a dress on which

> The barris were of gold full fine
> Upon a tissue of satine;

while "Largesse," who is naively described as having "her colere open to show her brooch," is habited in silk.

> A golde brooche ful wel ywrought,
> And certes it missate her nought,
> And through her smock ywrought with silke,
> The flesh was seen as white as milk.

It has been seen that "glass from Gaul" was brought into England in Saxon times. The art of making glass appears to have been practised here from a very early time, and there is reason to believe that windows were glazed in general use about 1180. The art of blowing glass, however, which was followed on the continent from about the date we have just mentioned, was not imported till long subsequent; the first glass bottle produced in England being not made till 1557.* The glass made at home, besides, must have been always inferior, as we find it stipulated in contracts for stained windows that the glass shall be from abroad. Thus, in the chapel at Warwick, John Prudde of Westminster, who, though evidently a man somewhat versed in the arts, is merely denominated "a glazier," was employed to paint the windows; and in the covenant it was stipulated, "that he should employ no glass of England, but with glass beyond the seas, and that in the finest wise, with the best, cleanest, and strongest glasse beyond sea, that may be had in England, and of the finest colours of red, blew, yellow, purpure, sanguine and violet, and of all other colours, that shall be most necessary and best, to make and embellish the matters, images, and stones, that shall be delivered, and appointed by the said executors, by patterns in paper, afterwards to be newly traced, and pictured by *another painter* in rich colours at the charge of the sayd glazier."

Others of these incidental notices to be found in Walpole are equally curious. "We have a royal order to pay a certain painter 20s. for painting the Exchequer chamber: that Odo the goldsmith, be paid 4 pounds 11 shillings for making the pictures (meaning thereby statues): that the king grants for building at Westminster £2,591, in which sum Licoricia, the widow of David, a Jew of Oxford, was bound: that William the Florentine, our painter, make the pictures and frontispiece of the altar, and the cost shall be paid upon the view of honest and lawful men."

Fearful that we have already dwelt at too great length on the historical part of our Essay, we shall now proceed at once to review cursorily the later manifestations of the arts of Design, from the time of Elizabeth. Fortunately, the styles of ornament from that of Francis the I., occupying by far the larger portion of the work to which this Essay is prefixed, it is only necessary to mention them chronologically.

Contemporary with the Arabesques (as they have been somehow or other termed) of the Vatican and the Palazzo del Te, so superior in taste and variety to anything then done, a love of novelty in decoration spread over Germany, France, and Flanders. Goldsmiths' work especially became very elaborate, and immense sums were expended in the setting of jewels and enamelling. This was pursued by many great artists, and the prevailing form of the panelling, varied and broken by belts and figures which began at that epoch, has a peculiar applicability to chasing and carving. The armour of the time of Henry VIII. was covered with chasing inlaid with gold; the suit presented to him by Maximilian, and the suit worn by Francis I., in the well-known portrait by Mittan, present wonderfully beautiful examples of this inlaid work. Enamelling also was much practised; those on copper produced at Limoges are much and deservedly admired.

Francis I. has been rewarded for his patronage of the fine arts by the honour which we associate with his name, in connection with the productions of the time; and perhaps those examples found in France, and distinguished as the style Francis I., are the finest of all the varieties of the prevailing style of the age. The Flemish is of a larger and more massive character, and possessed of more richness and power in its bizarrerie, but less distinguished by chasteness, artistic treatment, and freedom in the accessaries; while the Elizabethan is meagre in comparison. Of all these three varieties the reader will find ample illustration in the present work.

Although the chapels of Henry VII. and of St. George at Windsor, were not completed till pretty well on in the reign of the Eighth Henry, the buildings began by him were wholly different. In imitation of his neighbouring king, Henry invited artists from Italy and elsewhere, and the principal men who were retained at his court—Holbein, John of Padua, and others—were fitted to introduce innovation rather than to avert the decay of English architecture. Previously to his time the picturesque manner of building denominated the Burgundian was introduced into England. It was used chiefly for palatial edifices, the English nobility now becoming too refined for the dark and gloomy castles in which hitherto they had lived. It is asserted that this so called Burgundian style afforded our builders the true prototype of the Tudor, being ascribed to the two first reigns in that dynasty. There are scarcely any examples of it now remaining in the country, and the two buildings known to be of Holbein's design, viz. a gatehouse to the Royal Palace of Whitehall, and a porch to the Earl of Pembroke's mansion at Wilton; "the first," according to Britton, "exhibits the features of the latest Tudor style, and that at Wilton the revived Italian." Holbein made also many designs for chimney-pieces, jewellery, and enamelling, (one of his jewels we give below,) while John of Padua, as greater men had done, made designs for the tapestry of the palace, although professedly an architect.

Fig. 16.

Of the Elizabethan much has been written of a depreciating character, but at the present day it is more admired; and certainly the numerous edifices throughout England, built in the reign of Queen Bess, and decorated with the massive carved furniture, every part in perfect harmony with the whole, warrant the highest encomiums that have yet been lavished upon it.

The Elizabethan, moreover, is the last link in the chain of our national architecture. In the reign of James, the genius of Inigo Jones, heralded by the growing influence of the classics, planted the first worthy adaptations of the Italian architecture in England, and Gothic, where it was still practised, was degraded indeed. The classic taste went on increasing in the following reign, and its influence was assured by the collections of antique marbles and Italian pictures made by King Charles and the Earl of Arundel.

The stream had set in which was to continue to our own time. The Gothic gradually became identified with all that was barbarous, as indeed the term Gothic sufficiently evinces; while, from the Italian going further into the strictly classic, we have of late years built exact copies of Greek temples, the insignia of sacrifice and pagan ceremonial, (such as the skull of the bull with its fillets, which we have already figured,) actually showing themselves on the fronts of our colleges, churches, or mechanics' institutes. The furniture, however, which completed the interior of these buildings, maintained its native character. It was never thought of, except during a short time of the great French revolution, when the enthusiasts, contemning modern religion and Christianity altogether, carried their admiration of ancient philosophy so far as to imitate the manners of the Greeks both in costume and in furniture.

The carved work of the time of Charles, as seen on the high and elaborate backs of chairs, on cabinets, &c., is often very graceful. It was principally of Flemish production. The design is composed of foliage much more than the panel and riband, and occasionally we see representations of actual nature of excellent execution. One of the plans of Charles was to have established, in a princely manner, an academy or college of the fine arts. Institutions of a like nature were everywhere established on the Continent; but the character of Charles' projected establishment was far too aristocratic

* Glass was applied by Roger Bacon to many scientific purposes,—the magic lantern and the magnifying glass being both constructed by him, 1250—1260.

to have been practically beneficial, at least in the lower and more popular walks of art. But we must not omit, in speaking of this age, and more particularly of the wood carving which distinguished it, to mention the name of the greatest man in this way that has ever appeared. Of the works of Grinlin Gibbons accessible to the public we cannot speak, being ignorant of the places where they are to be found, except the pedestal of the statue of Charles at Charing Cross, which can give no adequate idea of the beauty of those executed in wood at Burghley-House, Petworth, and elsewhere. The subjects are, for the most part, swags of flowers and fruit, extending from side to side of the immense chimney-piece which occupies nearly the entire end of the room, and dropping down each side. Bunches of flowers in total relief, enlivened with birds and animals, shells and vases, of execution as exquisite as the design is luxuriant and artistic.

The triumph of the Puritan party was the signal for the retirement of the fine arts, and to say the truth, the partisan of *Christian art*, at the present day, can hardly blame them, seeing the *heathenish* turn that things were taking at the time. To be sure, the Puritans considered any representation of the Virgin, or of the persons of the Trinity, as bad or worse than the naked gods and goddesses which Arundel had raised at York-House, but which were then removed to Whitehall Gardens, and Enoch Wyatt was employed to cover (!) them. Still the scripture pieces of Rubens, and of contemporary artists, are far from *Christian;* and it must be borne in mind, that although Charles had succeeded in getting possession of Raphael's cartoons before Louis XIV., they were not even unrolled till long after the time of the Restoration. The cavalier love of art was undoubtedly mere *gusto*,—a refined and luxurious taste, not an elevated appreciation. Anne of Austria, from quite opposite motives, attacked the arts in a similar manner to the Puritans, at least those specimens within her private jurisdiction, in the palaces of Chateau-Madrid and the Luxemburg. Certain pictures and statues, valued at 100,000 crowns, placed there by Francis I., she caused to be removed and destroyed, because of their nakedness and heathen character.

Had no destruction and spoliation taken place during the change and fluctuation of religion in this country, our notices of chasing, casting, carving, enamelling, and painting, would have been undoubtedly amply furnished with data: England must have been nearly as rich in all the interior appliances of the arts as in the grandeur of architecture. But from the time of the first order of Henry against the monasteries down to the time of the commonwealth, the wholesale destruction has left us almost destitute of early examples of the arts of design in some branches. The last of this series of persecutions against taste was an edict issued by the Commons, in 1641, for the taking away of "scandalous" appurtenances from all churches. Visitors were appointed, and allowed 6s. 8d. for each church. The journal of one of these visitors has been preserved, from which we may gather the sweeping way in which these worthies went to work. "Clare, Suffolk, Jan. 6, 1642. We broke down 1,000 pictures (corbel heads?) superstitious. I broke down 200. Three of God the Father, three of Christ and the holy lamb, and three of the Holy Ghost like a dove with wings, and the twelve apostles were carved in wood at the top of the roof, which we gave orders to take down, and twenty cherubims to be taken down, and the sun and moon in the east window by the king's arms to be taken down." This was one of five churches visited on the same day. A great change has taken place in relation to church decoration within a few years, but it is not old enough yet to make us believe it permanent. So lately as 1760, when a window of stained glass which had been preserved almost by miracle through all vicissitudes, from the time of Henry VII., having been presented to him by the magistrates of Dort, was bought by the churchwardens of St. Margaret's, Epping, and put up in the church there, they were indicted in the ecclesiastical courts for setting up superstitious pictures, &c.

The style of interiors and furniture which was introduced in the court of Louis XIV. is not what we might have expected from the manners of the time, being small in its forms, and wholly deficient in variety and freedom. Vapid and unmeaning, it was a fashion, and yet has lasted and found admirers; its use being lately revived in the frames of mirrors, stucco panelling, &c.* From this court Charles II. returned at the restoration, and while Lely was the great man, and afterwards Kneller, a swarm of little men who painted little pictures, landscapes, sea-pieces, flowers, &c. followed into England, and Antonius Verrio was invited to design for the tapestry manufactory then established at Mortlake, who soon however left that and took the lead in decoration. He appeared with a host of assistants, the chief of whom were Laguerre and Schieffer, and being a Neapolitan, introduced here, in a degenerated condition, the style that had been so grandly followed on the roofs and walls of many of the palaces of Italy. The reader will find a certain degree of illustration of this decoration, especially as applied to roofs, in those sheets marked Italian in the following series.

The large works undertaken by Verrio, were first the ceilings and staircases at Windsor—covered with allegories in which the historic characters of his own time figure triumphantly with gods and goddesses—and those at Hampton Court. He soon became a great favourite, had the place of *master gardener* and a mansion near Carleton-House. The money he received must have been very great; there are accounts extant of money paid by the king to Signor Verrio, during five years, amounting to £6,945,—an immense sum at that time.† This work he continued during the short reign of the last of the Stuarts; but on the accession of William, he refused for a time to serve him, and meanwhile decorated Burghley and Chatsworth. This lasted during twelve years, during which time he had £1,500 a-year for these productions. That Verrio was a man of great ability, indeed an extraordinarily *clever* man, there can be no doubt; but there are insuperable objections to his art, of weight enough to consign it to oblivion. In the first place, the darkness of the colours he used, and the confusion of his design, were opposed to the true *use* of ornament, which ought to lighten and enliven. It is difficult to contemplate one of his great staircases without a feeling of vertigo, or as if one was in the presence of a madman and in danger of the contagion, resulting from the heterogeneous amalgama of temples, hanging cornices, cupids, furies, bagwigs, courtiers, Herculeses, legs of goddesses, blue skies and orange draperies. In the second place, the mixture of the pictorial with the allegorical, and both with the decorative, is opposed to the *principles* of art; moreover, it does not combine with nor aggrandize the architecture, but, on the contrary, destroys the figure of the walls. The splendour of this kind of decoration, however, and the authority which it carried with it, gave it some permanence; and Sir James Thornhill, at a later time, was employed to treat the dome of St. Paul's, Greenwich Hospital, and other places in a similar manner. In France, the taste of the time of Louis XIV. continued in a great degree for a long period; Watteau, one of the greatest of ornamentists in a light and pleasant vein, having appeared with his ready invention, filling up the irregular panels with vignette pictures, and introducing much variety in the other portions of the ornament. Taste, however, all over Europe, was gradually declining for some time previous to the period we speak of; and although pleasing, the decorative productions of Watteau, or of any other mode adopted from that time to the present age —which is to a great extent an age of Revival—are wanting in the higher principles, as well as in power, applicability, and usefulness.

IV.

Such is a brief sketch, pointing out the prominent landmarks in the History of ornament. Having brought the subject down to the present, we shall continue it by some notice of the interest now felt in the subject, and of the Schools of Design, which already do so much to generalize as well as to direct taste in this department.

The subject of Design, in connection with the manufactures of the country, had been from time to time partially mentioned as a subject for public consideration by Mr. Roscoe, Dr. Bowring, and others; but in the indifference of English politicians to questions of art, perhaps partly resulting from the want of precedents; and in the absorbing importance of machinery to the manufacturer, causing him to forget every thing else; it was only about ten years since that a committee of members was appointed by the House of Commons to take evidence on the subject. This evidence was principally a comparison between the qualities of English and foreign productions, by which it appeared that English exports wholly

* For ample illustration of the style Louis Quatorze, see several pages of the present work.

† "Once, at Hampton Court, where, a few days before, he had received a thousand pounds in advance, he was in search of Charles, and at length found him in such a company that even his front of brass could not approach. He called out, 'Sire, may I have the favour of speaking to your majesty?' The king—'Well, Verrio, what is your request?' 'Money, sire: I am so short of cash, that I am not able to pay my workmen; and I have learned by experience, that pedlars and painters can't give long credit.' The king smiled, and said, he had very lately ordered him £1,000. 'Sire, but that was soon paid away, and I have none left.' 'At that rate,' said the king, 'you would spend more than I do for the maintenance of my family!' 'True,' said Verrio; 'but does your majesty keep open house as I do?' Yet this insipid repartee procured the sum he wanted from the *witty* Charles."—Sar-field Taylor.

depended on the excellence of the fabric and material, and that, consequently, they consisted of articles in which taste was little necessary; that, with articles wherein taste or artistic treatment was a primary requisite, we could make little way commercially, while the exports of France consisted nearly in the proportion of five-sixths of *fancy articles*, or articles the success of which depended on their *design*. In certain matters, iron and steel work of a particular kind for instance, the French production was more successful than ours, even when the cost of the raw material was double. The difference was moreover attributed to the establishment of schools throughout France, but principally at Paris and Lyons, for the education in drawing and other matters, of hundreds of those immediately engaged in manufactures. "Taste in France," says a popular publication, "is in remarkable contrast to the neglect of it among the working community of our own country. Taste is an abundant and cheap commodity across the channel—rare and costly on this side of it,—a circumstance due very much to the pains taken by the French government for a century and a half." In the department of silk weaving, it has been said, "they supply taste to the whole world in proportion to the exportations, which amount to 110 millions out of 140, the home consumption being only 30 millions. Among the weavers of Lyons, the whole community is educated to a certain extent in art, and every one more or less concerned in devising patterns. Much attention is devoted to every thing in any way connected with the beautiful either in figure or colour. The workmen may be seen in their holiday leisure gathering flowers, and grouping them in the most engaging combinations. They are continually suggesting new designs to their employers; and are thus the fruitful source of elegant patterns."

"There is hardly any considerable commercial house in the silk trade,"—we quote from the Report before the House of Commons on the subject,—"in which there is not a partner who owes his place in it to his success as an artist. The town of Lyons is so conscious of the value of such studies, that it contributes 20,000 francs per annum, that is about £800, to the Government establishment of the School of Arts, which takes charge of every youth who shows an aptitude for drawing, or imitative design of any kind, applicable to manufactures. Hence all the eminent painters, sculptors, even botanists and florists of Lyons, become eventually associated with the staple trade, and devote to it their happiest conceptions. In the principal school, that of St. Peter's, there are about 180 students, every one of whom receives from the town a gratuitous education in art for five years; comprehending instruction in anatomy, botany, architecture, and loom pattern drawing. A botanical garden is attached to the school. The Government allows 3,100 francs a-year, about £130, to the school. The school supplies the scholars with every thing but the materials, and allows them to reap the benefit of their works. Their Professor of Painting is a man of distinguished talent well known to connoisseurs.

"The French manufacturer justly considers that his pattern is the principal element of his success in trade; for the mere handiwork of weaving is a simple affair with the improved Jacquard-loom. He therefore visits the school, and picks out the boy who promises, by taste and invention, to suit his purpose the best. He invites him to his home, boards him, and gives him a small salary, to be gradually advanced. One gentleman told Dr. Bowring that he had three such youths in his employment, to the youngest of whom he gave 1,000 francs, or £40 per annum. After three or four years, if the young artist's success be remarkable, he may have his salary raised to double or treble that sum; and when his reputation is once established, he is sure of the offer of a partnership. Such is the general history of many of the school-boys of Lyons, and of many of the manufacturers. Even the French weaver, who earns only 15d. or 20d. a-day, prides himself upon his knowledge of design."

This school, which has been the most successful in Europe, the establishment of which was one of the good deeds of Napoleon, was fully described by several gentlemen concerned in the trade there carried on. Throughout France there are an immense number of schools, similar although smaller, every considerable town being able to boast of such an institution; while in Paris there are several, the most important of which, after the *Ecole Royale de Dessin*, is the *Ecole communale*. Throughout Belgium and Germany, also, free instruction is given in endowed establishments, partaking much of the nature of Schools of Design.

The result of this widely diffused participation in the pleasures derived from taste in art, besides the education afforded to professional *designers* for *manufactures*, or rather the establishment of such a profession, it must be apparent, is of the most beneficial description. The standard of taste of the whole community is elevated, they are critically alive to excellence. Another part of the evidence referred to education at home, and ample testimony was adduced of the ignorance of our industrial community on matters which ought to touch it so nearly.

The mass of our manufacturers had got into a regular habit of applying to France for designs, to such an extent that the annual expenditure for French designs by the district of Manchester, as the director Mr. Wilson was informed a short time ago by the Committee of the school there, amounts to no less a sum than £20,000.

Such is the commercial view of the matter. There is another equally in favour of popularizing taste, and that is the refining influence of art, the widening of the sphere of enjoyment. To the educated eye nothing is without beauty in the outer world, and a man's work becomes elevated by an immediate connection with nature in imitating the forms of grace he has observed by a knowledge of art. To this greatest of all arguments to the *man*, there is another nearly as great which addresses the *workman*, and that is the additional *knowledge and sensibility of hand* which this education induces.

These considerations induced the Committee to come to the resolution of recommending to Government the establishment of Schools of Design, which was accordingly done in London and Manchester. A movement had been made about seventy-five years ago in Edinburgh, and the school was there extended previously to the establishment of the London school. Gradually the communities of other great towns urged their claims to similar benefits, and now schools are established, besides in these places named, in Spitalfields, York, Nottingham, Sheffield, Birmingham, Coventry, Glasgow, and Newcastle

The statistics of the schools, as exhibited in last annual report, present us with the immense aggregate number of 1,313 students, being 586 in the Central school and Spitalfields, and 727 Provincial; and this number has increased during the present year to such an extent as amply attests their efficiency, as well as the awakening of a universal interest in the objects in view. The advantages thus afforded to the rising generation it is impossible to overrate, and the more especially may we speak with confidence on this matter, seeing that the Council and Director, whose knowledge is equally practical and varied, does not precipitately incline to realize a crude state of activity, and apparent rather than real ability on the part of students; but rather by confining their efforts to right principles of working, and careful practice, to prepare a broad and firm foundation befitting the future eminence of the school,—a school of intelligent workmen as well as able designers.

V.

The word *Design*, as a term in art, is one of very general application, and signifies the arranging together of parts into a harmonious and fitting whole. Of design in ornament, which is the branch under our consideration, this definition is strictly true. To understand what is *harmonious* and *fitting*, is the object of the education of the ornamentist in the theoretical part of his pursuit.

Ornament—that is, the decorative finish which our love of beauty requires to be superadded to the merely necessary—is, by its very nature, relative; not existing by itself, but in connection with, and subordination to, something else; viz. the object ornamented.

The Pictorial art, on the contrary, is subject to no such restrictive condition. It is subordinate to nothing, and has for its object direct imitation, for the purpose of reproducing the sentiment of nature.

We have had occasion, in the course of these pages, to call the attention of the reader to the circumstance of early examples of decoration being symbolic. In the first stage of art, indeed, *imitation* of nature is attempted as well in the accessaries of decoration as in independent works of art. But when we pass out of these rude beginnings,—as soon as the hand of the early artificer has gained the power to express his idea as he would have it expressed, the decorative becomes fixed and conventionalized. Thus it was both with the Greek and Gothic arts. The Christian church, we have seen, was altogether typical in its architectural as well as its decorative character; and in the possession of this quality, the truly ornamental is in intimate connection, not with art in its *imitative* or *scenic* capacity, but with art in its very highest development,—with the *representative* or *ideal*. It aids the object it decorates, not by making that object look like something else than it really is, but by enforcing its purpose, and adding harmonies to its intention. This being the case, it will be readily understood how a wreath, for instance, painted along a moulding, is more in accordance with the principles of the art when painted in one colour—a colour harmonizing with the ground on which it is placed—than if repre-

sented pictorially, as if it were a wreath of actual flowers. To illustrate this further by another instance. Suppose a vase or jar for containing wine, appropriately decorated with vine leaves and grapes in relief, severe taste would prevent these leaves and grapes being rendered deceptive and imitative of the reality, and would dictate the propriety of treating them as *a part of the jar;* they would then be in a measure *abstracted* from nature, and symbolize the intentional purpose of the vessel. Further, an attempt to give the leaves a paper-like thinness and whole relief would also offend; not only for the reason stated, but also from awakening an insecure feeling on account of the brittleness of the material.

On the other hand, the pleasure we derive from *colour* is to be considered, and taken advantage of, as well as that of *form*, even in those instances just brought forward; but it is to be used in a similar manner,—general colours in correct harmonies being the truly decorative, not imitation of the accidental appositions of nature. This avoiding of artistic imitation has doubtless been by some carried too far, and also, we are aware, that the contrary has its advocates, and some styles of decoration that have comprised many beauties, and made a permanent school, have belonged to an intermediate kind of art, partially combining legitimate decoration with picture. But, strictly speaking, imitations of natural objects are only ornaments in the sense in which all beautiful things are ornamental. "The artist and the ornamentist may choose out of caprice to unite their two arts, as in the case of *arabesques*, but the arts are not the less essentially distinct, nor, as a general rule, the less incompatible of practice. The very name *grotesque*, applied to that kind of art by the painters of the middle ages, is used by us to express anything very absurd or ridiculous; and in truth, since it is a matter of fact that arabesque painting or sculpture have always been the offspring of *artists*, they ought rather to be looked upon as a kind of beautiful nonsense, than as a species of art to be reasoned about."

Although it is not desirable to enter into any disquisition on the subject, which may seem in any degree abstruse to the general reader, we may be allowed to quote from the introduction to the Drawing-book of the Government School of Design, in which the nature of the art is treated in relation to the education of ornamentists.

"The art of the ornamentist may be considered in two points of view: first, as to its means and materials of operation, as an imitative art:—in regard to which it ranks midway between fine art and art purely mechanical, and partakes of the nature of both; sometimes, like the one, working solely by the hand—sometimes, like the other, by the aid of mechanism; or secondly, as to the end of its imitation:—by which it is essentially distinguished from fine art properly so called. On the nature of this distinction it is necessary that we labour under no misconception; for it is obvious, that if there be such an essential difference between the two kinds of art as is here affirmed, it must show itself more or less through every stage of the tuition, giving to it a specific character and purpose beyond that which it must have in common with every kind of elementary instruction in design. It is, of course, to be understood, that the distinction drawn between ornamental art and fine art is made in reference to some object towards which each stands in some manner related; for the fine arts, as dealing with moral expression, occupy a field into which the ornamentist has no claim whatever to enter: but in regard to the *beautiful* in the works of nature, they labour in common ground; and it is in their pursuit of this, and in the end arrived at by each in relation to it, that we discover their characteristic differences.

"Now, the artist (and by artist is meant the painter and sculptor, for the architect, as far as imitative art is concerned, is really an ornamentist), in dealing with beauty in the works of nature, never contemplates it apart from its natural subject. Beauty is with him an individual quality --it is the beauty of a horse, of a man, of a flower; and hence the expression of his ideas is necessarily made by a fictitious resemblance of the object in which the beauty naturally resides. He imitates the beauty of nature, by making beautiful images of natural objects.

"In the first place, then, in the matter of education, the beauties of form or of colour, abstracted from nature by the ornamentist, from the very circumstance that they are abstractions, assume, in relation to the whole progress of the art, the character of principles or facts that tend by accumulation to bring it to perfection. The accumulated labours of each successive race of ornamentists are so many discoveries made,—so many facts to be learned, treasured up, applied to a new use, submitted to the process of artistic generalization, or added to. A language and a literature of ornamental design are constituted; the former of which must be mastered before the latter can be understood, and the latter known before we are in a condition to add to its treasures. The very first step, therefore, in the education of ornamentists, must be their initiation into the current and conventional language of their art, and by this means into its existing literature."

It behoves him in this way to investigate, in some degree, the nature of beauty itself, as far as it is manifested in the established and classical forms, that he may go back upon nature as the great storehouse.

The forms of natural objects are of two species: one angular, describable by straight lines; the other circular, expressed by curved lines of various degrees of simplicity and regularity. Burke, in his well-known Treatise, has said, that he "cannot find any natural object which is angular and at the same time beautiful. Indeed, few natural objects are entirely angular: but I think those which approach most nearly to it are the ugliest." Admitting the truth of Hogarth's serpentine *line of beauty*, he adds, "Though the varied line is that alone in which complete beauty is found, yet there is no particular line which is always found in the most completely beautiful, and which is therefore beautiful in preference to all other lines; at least I could never perceive it." Accordingly, we find that the great majority of decorative forms are those of curvilinear construction. But although the angular and right-line figures are not greatly adopted in any of the leading styles, except such as were fitted for working in mosaic; yet it is not so entirely discarded as Burke's remark would lead us to conclude, and which would be the case if his remark were strictly true. Crystals present the only unmixed angular figures to be found in nature; and the beauty of these, independent of their charm in transparency or colour, is generally acknowledged.

Regularity is itself a beauty, especially in artificial productions; and such figures as the zigzag of the early Norman buildings, or the classic fret,

Figs. 17 and 18.

are undoubtedly beautiful by possessing a harmonious relation to the structure they adorn. The vertical and horizontal lines are the great fundamental lines of all architecture, and the form of general construction carried out in the detail is certain to be pleasing.

The circle has undoubtedly, when considered by itself, many higher properties than the square for the purposes of the decorator, and also will be found associated in nature with all that impresses us as beautiful. It is, however, almost invariably associated with the angular form, by being divided into portions or degrees by lines from the centre, evidently suggested by floral construction. We give in illustration a Roman boss, adapted from nature in a strictly geometrical manner, contrasting very strangely with our free Gothic manner, exemplified beside it, but still pleasing from its exactness.

Figs. 19 21.

In the Elizabethan we find these two elementary forms constitute the entire style, and in many of the roofs of that age this mixture

of lines is productive of the best effects. They reminded us of what has been already observed, showing forcibly that one great cause of the beauty and agreeable feeling conveyed by such ornaments arises from the fact that they carry into detail the general form of the surface on which they are placed.

But in taking a cursory view of the examples and authorities which time has collected on the subject, we cannot help observing that the best parts of all the styles are worked upon the basis of the curve, and that the most beautiful specimens are the nearest to that construction. The *line of beauty* is undoubtedly the radical form of the most part of design. To have thought of defining beauty as this *line*, or of considering it as the *cause* of beauty, was doubtless an absurdity, seeing it is only the *form* of beauty, and even then only a part of such form. Let us not, however, undervalue the observation, that grace in form is more or less identified with this description of shape, however trite the remark has of late become. When we look round us on nature this truth is no less observable; and those classes of plants possessed of leaves deeply cleft, like the acanthus, or which, like the vine or convolvulus throw out tendrils, and proceed in a curving and climbing figure, have always afforded the favourite materials of the ornamentist. It is not necessary, however, to insist much on the advantage of considering the skeleton or geometrical form of ornaments,—all are worthy of study, and susceptible of beauty, when used harmoniously with their environment, and in well understood proportions; the best advice to the ornamentist, who has acquired careful and exact drawing or modelling, is to desire him to do as the artist-workmen of the great Gothic ages must have done, to go out to the garden or field, to weigh well and study with precision the hues and contours there presented to him in endless variety; let him pluck a flower with its attendant green blades, and observe its action, the general and particular form in its leaves, stamens, stem; its anatomy, its surface, its transparency, its colour; paradoxical as it may appear, he may find it to be indeed an epitome of all he ought to study!

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AN ELEMENTARY TREATISE ON PERSPECTIVE;

BY

PETER NICHOLSON, Esq., ARCHITECT.

WITH REMARKS ON DRAWING FURNITURE IN PERSPECTIVE,

BY A TEACHER OF DESIGNS.

ILLUSTRATED WITH FIVE PLATES OF FIGURES.

AN ELEMENTARY TREATISE ON PERSPECTIVE.

PERSPECTIVE is the art of drawing on a plane surface true resemblances or pictures of objects, as the objects themselves appear to the eye, from any distance and situation, real or imaginary.

In order to understand the principles of perspective, it will be proper to consider the plane on which the representation is to be made as transparent, and interposed between the eye of the spectator and the object to be represented. Thus, suppose a person at a window looks through an upright pane of glass at any object outside, and, keeping the eye steady, draws the figure of the object on the glass, following the various outlines as if the pencil touched the object itself; he would then have a true representation of the object in perspective, as it appears to the eye; for every part of the picture would coincide with the corresponding part of the real object, and if a line were drawn from the eye through any point of the drawing on the glass, it would, if continued, touch the same point of the distant object.

This method of tracing the outlines of objects, or at least some more convenient devices for the same purpose, are sometimes extremely useful in obtaining accurate views where the objects occur in suitable situations, or may be set up as models; but in many cases this facility does not present itself, and we are required to make drawings of objects that either do not exist in reality, or not in the positions in which it may be desired to represent them. On these and many other occasions mechanical means cannot be resorted to, neither can any facility of sketching acquired by practice prove at all times sufficient for drawing a perfect outline.

Certain rules have therefore been made, deduced from the principles already explained, for discovering the positions of the various lines which form the outlines of objects, when the figure, magnitude, and distance of the objects are known, and these rules, together with the demonstrations of their truth, constitute the *practice and theory of perspective.*

The surface on which the object of view is represented, is called the picture, or the *plane of the picture*, which is always supposed to stand upright, or perpendicular to the horizon.*

If a person stand in a long avenue or walk, which is straight and equally broad throughout, the sides seem to approach nearer and nearer to each other as they are farther from the eye, and if the avenue be very long, the sides appear to meet in a point. From these preliminary observations the following conclusions will be sufficiently obvious.

Upright straight lines, (as the angles of buildings, &c.,) being parallel to the plane of the picture, become upright and parallel in the picture itself.

Parallel straight lines, whether horizontal or inclined, which lie in a plane parallel to that on which the picture is drawn, become also parallel to each other in the picture. All other parallel straight lines will converge to a point, either in the picture, or at a distance out of the picture, that is out of the boundaries generally fixed upon as the sides of the drawing; and the points to which such lines converge are called the *vanishing points* of those lines; but it may perhaps prevent confusion, if we consider the picture as unlimited in extent, in which case all such lines will converge to a point within the picture, as in the example we have adduced of the long avenue.

We will now proceed to the most useful rules for drawing all kinds of figures in perspective.

PRINCIPLES OF PERSPECTIVE.

[*Plate A.*]

Let ABCD, *Plate A, Fig.* 1, be a flat board or surface of any kind, or it may represent in miniature the ground we walk upon, and it is therefore called the *ground plane*, whether denoting the real surface of the ground, or, as in this case, the support of a model. Let a b c, &c. denote the model of a house standing on such plane.

Let M be the point on which the spectator is supposed to stand, which is therefore called the *station point;* and let MO be a perpendicular to the ground plane, drawn from M the *station point*, to O the position of the spectator's eye. The point O is called the *point of sight.*

Let IWXN be the plane of the picture, raised perpendicularly on the ground plane ABCD; the line IN in which the plane of

* In the various books on perspective, the representations are always supposed to be made on a plane, perpendicular to the horizon; and indeed that is always done in detached pieces, for it would be absurd to produce a picture so contrived that the spectator must view it under an angle to see it to advantage: the consequence of such an arrangement would be, that it would seem much distorted, unless the spectator placed himself in a position which no man in his senses would choose in viewing a work of art. In pictures which decorate the ceilings of buildings, there are, however, numerous examples of perspective, where the plane of the picture is inclined, or even parallel to the horizon; or where the surface is curved, as in internal domes, cylindrical vaulting, coves, &c.

This species of decoration is seen in many Italian churches, and in some of our own public buildings; and where the design is confined to human figures, or objects which allow considerable latitude in the position of the spectator without much distortion, the effect is sometimes tolerable; but unfortunately the painters of old frequently chose to represent architectural subjects, such as a supposed continuation of the building upwards by the addition of a painted order, or the appearance of a dome supported on pilasters, painted on a flat circular ceiling. These always appear miserably distorted unless seen from one particular point, and as there is no reason why a spectator should stand in one part of the floor rather than another, the general bad effect is the most striking feature of such productions. It is to be lamented that artists of acknowledged reputation should have so far mistaken the object of painting as to waste their time on such futile attempts at illusion: thus converting one of the greatest ornaments of architecture into an absolute deformity.

Panoramic painting is performed on the interior of a cylinder, in the axis of which, at a certain height from the bottom, is the station point; and as the spectator is not permitted to approach near the picture, the effect of panoramas, so far at least as perspective is concerned, is the most perfect that art can produce.

picture meets the ground plane is called the *intersecting line;* and the straight line VL parallel to IN, and at a distance from it equal to MO, the height of the eye, is called the *vanishing line* of the ground plane ABCD, and consequently of all other planes parallel to it.* Now in order to find the perspective representation of the house on the picture, draw OL parallel to b c, the line of one front of the house, and the point L in the line VL is called the vanishing point of the line b c, and of all lines parallel to it. In like manner draw OV parallel to b a, the other front, and the point V is the vanishing point of b a, and of all other lines parallel to b a, as d g, e h, f i, the lines of the root.

Through the vanishing point L, draw KJ perpendicular to the vanishing line VL; and through the point of sight O, draw OJ and OK parallel to the inclined lines d e and e f; the points J and K are the vanishing points for the inclined lines of the roof.

From the visible extremities a b c of the ground plan of the house, draw the lines aM, bM, cM, to the station point M, meeting the intersecting line IN in the points R, S, T.

In the plane of the picture, draw R*g*, S*d*, and T*f*, perpendicular to the ground line IN. Prolong the line a b of the front of the house till it meets IN, and the point P, where these two lines meet, is called the *intersecting point* of the line a b.

Draw PQ, in the plane of the picture, perpendicular to the intersecting line IN, and make PQ equal to the height b d or a g of the walls of the house; Q is called the intersecting point of the top g d of the wall; and generally the intersecting point of any line is the point in which that line produced meets the plane of the picture.

Join the intersecting point P and the vanishing point V by the line PV, cutting R*g* in *a*, and S*d* in *b;* also join the intersecting point Q in the same vanishing point V by the line QV, meeting R*g* at *g*, and S*d* at *d:* then *a b d g* will represent the front a b d g of the house.

Again, join *b*L meeting T*f* at *c*, and join *d*L meeting T*f* at *f*. Draw *g*J, *dg;* join K*f*, and produce the line to meet *d*J in *e*. Draw *e*V cutting *g*J in *h*, and we have thus a complete representation of the house.

PROBLEM I.

To put a Square in Perspective.

Let ABCD, Fig. 2, be the plan of the square, placed in any desired position, to be seen from the station point S. Draw the horizontal vanishing line IK, and parallel to it the intersecting line LM, and the student may for the present draw these lines nearly at the same inclination to the other lines as they are drawn in the figure. From S let fall ST perpendicular to IK, and T is the point of sight. From the angles ABCD of the square draw lines to meet at S, and draw OS parallel to AD or BC, and SN parallel to AB or DC; the points O and N are the vanishing points for the sides of the square to which they are respectively parallel.

Continue AD to P the intersecting point of the side AD, and join PO, cutting DS and AS in H and E. Draw HN and EN, cutting BS and CS in F and G, and draw GO. The figure EFGH is the perspective view of the square as required.

On inspecting the figure it is evident that the more distant the plan of the square is from the intersecting line, the more the perspective figure will be foreshortened; because the point P, which regulates the distance of H, the nearest point of the figure, is moved in the direction of M in proportion as the point D becomes farther from LM.

It is also evident that the view of the square might have been obtained without the line BS; because, having found the points F and G, a line joining them must complete the figure: such a line is however sometimes useful as a check to the rest of the work.

PROBLEM II.

To put a triangle in Perspective.

Let ABC, Fig. 3, be the plan of the triangle, S the station point. Draw SN and SO respectively parallel to BC and BA, and draw SP parallel to AC, which line SP must be continued till it meet the intersecting line IK produced: continue AB to R, and join RO. Join FN, and draw DE to the point where SP cuts IK produced. DEF is the view of the triangle.

The distant vanishing point may in this case also be dispensed with, but it is used because a point so situated is sometimes necessary.

PROBLEM III.

To put a pentagon in Perspective.

Let ABCDE, Fig. 4, represent the plan of the pentagon. Having, as in the preceding problems, drawn lines from all the angles to the station point S, and lines from S parallel to all the sides, there will be found the vanishing points OQTV, and a very distant one in the direction of P. Continue AB to R; join RO, and draw lines to the several vanishing points. FGHIK is the view of the pentagon.

We shall not multiply examples of straight-lined figures, because it is quite evident that the same method is applicable to all forms of which we can draw a plan.

PROBLEM IV.

To put a circle in Perspective by means of eight points of intersection.

[*Plate B.*]

In the foregoing problems the figures have been supposed to stand inclined to the picture. We will now suppose a square circumscribing a circle to be parallel to the picture, in which case the vanishing point of two of the sides will be the point of sight, while the other two have no vanishing point at all. The plan of the square is also drawn on one side, instead of under the view, and the station point is omitted.

Let ABCD, Fig. 1, Plate B, be a square. Draw the diagonals, AC, BD, and from their intersection as a centre, describe a circle to touch the sides of the square. Through the points IKTV, where the diagonals cut the circumference, draw the lines GE, HF, LM, and NO, respectively parallel to the sides of the square.

We have thus ascertained eight points through which the circle passes, namely, PQR and *a*, where it touches the square, and IKTV where it cuts the diagonals, and these points are transferred to the sides of the square.

Upon WX, Fig. 2, the intersecting line, set off DC equal to DC Fig. 1, and DE and FC also equal to the same spaces in Fig. 1. Find the centre *a*, and draw lines from all these points to the point of sight P in the vanishing line YZ. Make CN equal to the distance the nearest side of the square is supposed to be from WX.

* The vanishing line for horizontal lines, always represents a level plane at the height of the observer's eye, so that if he stand on the sea-shore, the visible horizon of the sea is the vanishing line of all horizontal, or level objects; the cliffs and buildings rise above the horizon, and their lines, where straight and inclined, converge to some point in the line of the horizon, while the beach and sands are as evidently below the horizon, and their lines converge upwards in the same manner. In the example, Plate A. fig. 1. the object is entirely below the level of the eye, but it is easy to see that it might be above the eye, or partly below, and partly above, as is mostly the case in the view of a building.

From P set off PY equal to the distance of the station point from P, and Y will be the vanishing point of a diagonal of the square. Join NY, and draw *ec* and *bd* parallel to WX. Draw the other diagonal *bc*, and the centre line PR parallel to *bd*. We have thus the view of the square; the centre line PR is the view of PR Fig. 1, *g* is the perspective centre of the circle, and IKTV the points IKTV Fig. 1. The curve must now be traced through the eight points as fairly as possible, always keeping in mind that the perspective figure of a circle is a perfect ellipse. These eight points through which the curve passes are in most cases sufficient, but where the work is to a large scale, it is sometimes desirable to find sixteen or more points, the manner of doing which will be explained in the next problem.

PROBLEM V.

To put a circle in Perspective by means of sixteen or more points of intersection.

Let ABCD, Fig. 3, Plate B, represent the perspective figure of a square drawn by the methods already pointed out. Draw the diagonals, and through the point of their intersection, which represents the centre of the original circle, draw a line *fg* parallel to the vanishing line.

On a separate part of the paper, with a radius equal to *ef*, or *eg* (which are equal) describe a quadrant EFGHI Fig. 4: divide the arc into any number of equal parts, and through the points of division draw lines HL, GM, FN, parallel to one of the radii IK, to cut the other radius EK.

Transfer all the parts of the radius EK thus divided upon the line *fg*, Fig. 3, namely, KL from *e* to L, KM from *e* to M, and KN from *e* to N, both ways. Through the points of the division of the line *fg* draw lines to the vanishing point of AB, or CD, and through the points where these vanishing lines cut the diagonals, draw lines to the other vanishing point, and from each vanishing point draw a line through the centre *e*. Then trace the curve through all the points of intersection, as shown in the figure. In this figure we have divided the quadrant into four parts, by which we obtain sixteen points through which the curve passes; and this is as many as are generally requisite for the most careful drawing.

PROBLEM VI.

To draw the Perspective view of a House by means of plans and elevations.

Let BIDLK, Plate B, Fig. 6, be the plan of a house, or so much of it as can be seen from the assumed point. Let O be the station point, so situated that the building may be seen to advantage,* and under a moderate angle.

Draw the *centre line* OZ continued indefinitely to cut or meet the plan, and this line must always be drawn so as to pass at or near the centre of the picture, † and if we suppose that the house is the principal or only object to be represented, and is therefore destined to occupy the greater part of the picture, the line OZ must pass near the centre of the plan.

Draw the *intersecting line* VL, crossing OZ at right angles somewhere between the plan and the station point.‡ From O, draw OL and OV, respectively parallel to the two sides of the building, to the vanishing points L and V.

Draw lines Bb, Ii, Dd, Kk, Ll, &c., from the principal angles of the plan, all tending to the station point O as a centre; and cutting the intersecting line in b, i, d, k, l.

At any convenient part of the paper, which is here supposed to be underneath the plan, draw the vanishing or horizon line RQ parallel to VL, and at a convenient distance below it, which must be greater or less as we suppose the eye to be more or less elevated, draw the intersecting line WX parallel to RQ.§ Draw the lines b b, i i, d d, k k, l l, parallel to the centre line, as far as WX, so shall these lines represent the angles of the building in the perspective view.

Continue the lines ID, mn, to cut the line VL in h, and e, and from these points draw lines h h, and e e, parallel to the centre line, to cut WX: the line m n represents the greatest projection of the cornice, and ID the wall of the building.

Upon e e set off e j the centre height of the building, taken from the elevation, and from j set off j g the depth of the cornice and blocking-course, and describe the profile of the cornice, which will have an increased projection, but no increase of depth. From the profile thus found, draw lines to the vanishing point R, which will be the lines of the cornice and top of the central building. In like manner may the cornice of the side buildings be drawn, but the operation is not shown to prevent confusion. The position of the ground line of the building, windows, and other parts may readily be laid down by the means already pointed out, and the vanishing points for the bow window are found by drawing lines parallel to the several faces from the station point, as before directed.

* The choice of a point of view is one of the most difficult problems in perspective, and though it cannot be reduced to any positive rules, the observations which follow will, we conceive, be generally useful to the student. In the first place, we should never put the station too near the object, because a distortion is the inevitable consequence of so doing, and though a station too distant may sometimes produce a tameness of effect, it is upon the whole by far the least fault of the two; for in a geometrical elevation, where the point, if we must suppose a point of view at all, is at an infinite distance, the effect, however unnatural, never becomes offensive; but in a view taken *too near* the object, there is absolute deformity. It may perhaps be expected that we should dictate the precise angle under which a picture is to be seen; in other words, how far the observer should be from the picture to see it with advantage. On this head common sense suggests the best observations. If a person enter a room where pictures are hung up, he places himself before each in some degree according to the size of the work. Thus a picture three feet long would be viewed by him at a distance of three or four feet, and larger works at a greater distance: but it must be remarked that, as large pictures have generally more complicated subjects than small ones, they are commonly viewed nearer in proportion to their length. This may give some idea of a rule to be observed in choosing a point, but the student must take care that his work never look deformed *from any station whatever*. With this important object in view, he will find that some pictures, such as landscapes, will permit of a much larger angle than buildings, or subjects in which the lines are straight and regular, and among the latter there will be a great difference according to circumstances which cannot here be touched upon.

† When any one looks at a picture, he naturally places himself opposite to the centre of it, or nearly so, because he can then see both sides of it equally well. The point of sight should therefore not be far from the centre, for if it is, the objects on one side will present a distorted appearance when viewed from the natural position; but it need not be absolutely in the centre; indeed in views of regular architectural subjects, it is best to place the point of sight a little way from the centre, or else one side of the picture may become a perfect copy of the other, which always produces a stiff, disagreeable effect. In most compositions there are objects near the sides of the picture, and when these are the subject of distinct perspective operations, the centre of the picture will be of course far from them, either to the right or left, as the case may be.

‡ It is indifferent to the result where we place the line of picture, but it is often convenient to draw it so as to touch some projecting angle of the leading object, for thus we obtain at once a line of heights; but the student is often guided by the size of his intended view, for he may make it of any dimensions with the same sized plan, by drawing his intersecting line, either near the station for a small view, or far from it for a large one, and indeed it may be drawn, if the scale require such an arrangement, entirely beyond the plan, that is, he may leave the plan between the intersecting line and station.

§ The height of the eye is subject to much variation. On level ground it cannot exceed between five and six feet, the real height of a man's eye, but in most cases an increased height may be given in a picture without impropriety.

Bird's-eye views suppose the eye at a immense height above the objects, so that the horizontal line is near the top of the picture. Some persons put the horizon in such views really a long way above the top, and yet show a visible horizon of landscape above the buildings in the picture; but this always produces a miserable effect.

Except in bird's-eye views, the height of the horizon in the picture does not altogether show the real height of the observer's eye; because with the same height of horizon, the eye may be very differently situated, and by cutting off the lower part of the picture we only hide the nearer objects, while we lower the horizon.

The student is now acquainted with the most generally useful method of putting a design in perspective, because by this process he can form a better idea of his picture, or how the parts will arrange themselves in the view before he begins, than by any mode of proceeding which does not keep the geometrical plan constantly before his eyes. It is easy to conceive that the view may be made on another paper, by transferring the distances, instead of continuing the lines b b, i i, &c., downwards.

PROBLEM VII.

To draw the Perspective view of an ornamental Obelisk.

[*Plates C, D.*]

Plate C, Fig. 1, exhibits the plan of the obelisk. Here, as the several surfaces laid down have different heights, we have produced the lines representing them in the plan to the intersecting line, so as to meet it at POMNL, &c., the intersecting points of these lines.

In order that the plan might be sufficiently large to exhibit with accuracy the various details necessary in a complicated subject, and at the same time preserve the distance required to prevent a distorted picture, the station point is beyond the extent of the paper, and is supposed to be inaccessible by ordinary means. In these cases the lines may nevertheless be drawn by several methods, with the same accuracy as if a ruler were actually applied to the station point, as we shall hereafter explain; but the student must, for the present, take it for granted that the lines may be so drawn.

The two extreme lines must however be found before any of the others can be drawn; and to find these, having fixed upon the distance from which it is desired to view the building, draw the centre line *d*D in the required position with respect to the plan, (see notes p. 3), and cross it at right angles with the intersecting line YS. Upon another paper draw the outline of the building, (for which purpose the outer square is enough,) to a smaller scale,* so as to permit the station point to come in, and draw two lines from the angles X and Y to the station. Then draw the lines X*a* and Y*b* parallel to the lines so found in the smaller plan.

The vanishing points must now be found, for these must be at least as inaccessible as the station point. Now, as the distance of these points exceeds the limits of our paper, we must again have recourse to a smaller scale, but in this case on the paper itself; therefore, setting off some aliquot part, as one-seventh of the distance of the station from the intersecting point, from D in the centre line, to *f*, draw *f*V and *fg* parallel to AX and AY: so shall V and g be each equal to one-seventh of the distance of the respective vanishing points from the centre line. We may now proceed to put the obelisk in perspective.

The letters P, O, N, M, &c., Plate C, Fig. 2, denote the positions of the intersecting points in Fig. 1, and are there denoted by the same letters. Perpendiculars are drawn from these points to p, o, n, m, &c., where the heights are given by the half elevation to the left. Thus a section is found which, while it agrees with the geometrical section (or elevation) in the heights, differs from it in the projections, which are obviously increased in proportion to the obliquity of the object in the plan. QR and QS are lines drawn to the vanishing points. These should be drawn by the same method of a reduced scale, and as high as possible in the paper, in order to afford accurate means of drawing the vanishing lines of the building.

By drawing lines from all the angles of the section so found to the right hand vanishing point, we obtain all the perspective lines on the right hand; and by finding the angular points of these lines, namely, by drawing lines from *kkk*, &c. in Plate C, Fig. 1, to the station point, and transferring these points to the corresponding angles in Fig. 2, we obtain the other perspective lines by drawing the various lines to the left hand vanishing point. The extreme angles are found by drawing lines to the station point; in the manner already shown.

Plate D, fig. 1, shows the outline of the obelisk completed.

The best method of drawing lines to an inaccessible point is certainly by an instrument called the centrolinead; but as such an instrument is not always at hand, it may be useful to show some modes of drawing the lines without such aid.

Having found the lines QR and QS, Fig. 2, draw the perpendiculars QT, RY, and SX to meet the horizon or vanishing line ZX. Now if we divide QT into any number of parts, and SX into the same number, and draw lines connecting the points of division, such lines will all tend to the vanishing point: therefore, using a proportional scale of any kind, by first finding the ratio of SX to QT, we can obtain a line at any point between Q and T, or below T, which shall tend to the same point as QS; and the same with regard to the other vanishing point. The lines *st*, *st*, &c. are found by dividing QT, SX, and RY each into seven parts.

It is sometimes advisable to draw a number of lines about half-an-inch apart, or nearer, all tending to the vanishing points, and then draw the lines of the buildings by the eye, using the lines first found as a guide; but this requires an experienced hand.

From what has been said respecting the vanishing points, it is sufficiently clear that, when both these points are equidistant, the centre line must pass through one diagonal of the square, and that, as the square is turned round, one side of it approaching nearer and nearer to a parallel position with the picture, the distance of one vanishing point will increase, and that of the other diminish, until the side of the square become actually parallel to the picture, in which case there will be no vanishing point for that side, while the point of sight will be the vanishing point of the other side.

It is therefore advisable in cases of parallelism to find the vanishing point of a diagonal of the square, which may be done by drawing a line, parallel to such diagonal, to the station point, as before directed in Problem iv.

The perspective appearance of a circle is either a circle or an ellipse, whenever the whole of the circle is seen, but when the spectator stands on the circumference of a circle, the part he draws must be a parabola, and if he stand inside any part of the circle, and draw a portion of the curve, the figure will be an hyperbola. By way of illustration, let the student stand in any circular building, such as the Pantheon at Rome, the Radcliffe Library at Oxford, or as a more homely instance, the ring at Astley's amphitheatre, and then draw the curve by mechanical means.

The perspective appearance of a globe when the whole of it is seen, is always either a circle or an ellipse; it is a circle, only when a line drawn to the point of sight passes through its centre.

In order to make a view of a globe, draw lines from the station S, Plate D, Fig. 5, to touch the globe, and join the points of contact by the line *ab*; *cd* is the breadth of the perspective figure in the picture, the height must be laid down from a scale, and the circle which represents the globe (of which circle *ab* is the diameter), must be circumscribed by a square, and put in perspective by the methods already shown. By considering the two figures of the globe A and B here shown in the plate, it may appear strange that that of the globe A should be actually broader than B; for the line *cd* of the globe A is longer than the

* In making views of extensive architectural designs, where many detached parts occupy a large space of ground, it is advisable to draw the whole plan to a small scale in the first instance, in order to compose the view judiciously; for if this be not attended to, many bad, and even ludicrous effects sometimes ensue—a near object may hide an important part of the design, or a triumphal arch at some distance may seem dexterously balanced on the top of a column in the foreground; a species of defect which the greatest skill in aerial perspective cannot entirely conceal.

same line of the other globe, but it must be remembered that the picture *ef* is seen at a considerable angle, so that the space *cd* of A is not larger to an eye at S than c d of B. We mention this, because many absurd objections have been raised against perspective on account of this seemingly unnatural fact; and parallel perspective, where such anomalies are most manifest, has been called a distinct species, and contrary to nature. If the mere circumstance of drawing on a plane be defective, and perhaps it may justly be reckoned so, the fault should at least not be attributed to the rules of perspective; and we may observe that, in general, the choice of a point sufficiently distant will remove all such objections.

PROBLEM VIII.

To draw an Arm-Chair in Perspective.

[*Plate D. Fig.* 2.]

Let AB, BC, and their angle ABC, represent any angle which the eye may determine, for the respective sides of the Chair to be laid down. At a height supposed to be that of the eye, draw a horizontal line DE. From the points A and C draw the lines till they join the line DE; the point of their junction gives the vanishing points D and E. In this figure the point D extends beyond the drawing, but may be easily imagined. *Proceed then to sketch the Chair*, and let the receding parts of it in the respective limbs, ornaments, and working subdivisions be regulated by the vanishing lines; as, CFD determines the position F of the castor under, as well as of, the back leg F; GHE the height of the ornamental curves of the legs B and C; DIK the points of the arms I and K, and so on of the other parts and ornaments of the Chair.

On the same principle any other piece of common furniture may be drawn in perspective.

The student who carefully studies the preceding problems may, with practice, make himself master of the fundamental principles of perspective. Several expedients may be devised which occasionally shorten the processes, but these could not have been noticed in a work where few examples are given, without tending to create the confusion they are often intended to obviate; and we think it better to instruct the student how to work by means which keep the first principles always in view. We shall however mention one method of dividing lines perspectively on account of its great utility.

PROBLEM IX.

To divide a line into equal spaces.

[*Plate A, Fig.* 5.]

When we have a line to be divided into equal spaces, as row of houses, Fig. 5, having found the two ends of the the line, and draw AB to the vanishing point, prolong CA to E, any point some height above the horizon; draw EF parallel to the horizontal line IK, and draw EG to the vanishing point. From any point H in the vanishing line, draw HF through DB produced to L, and divide EF into the proposed number of parts. From each point of division, draw a line to H, cutting EG. Perpendiculars let fall from such points will divide AB as required.

It is advisable to place the line EF some height above AB, and that the point H be somewhere near the middle of the subject, because the intersection of the lines is then not too oblique to be observed with accuracy. The line EF may be also divided unequally, in any proportion that may be required.

OF THE CENTROLINEAD.

[*Plate D, Figs.* 3 *to* 9.]

This is an instrument, invented by P. Nicholson, for drawing lines which tend to a distant point not accessible, and is therefore of great use in perspective.

We shall here exhibit the instrument and its parts.

Fig. 3 shows the centrolinead complete.

Fig. 4, a part of the same to a larger scale.

Fig. 5, brass plate, by which two running legs and the blade are connected.

Fig. 6, joint or hinge connecting the legs.

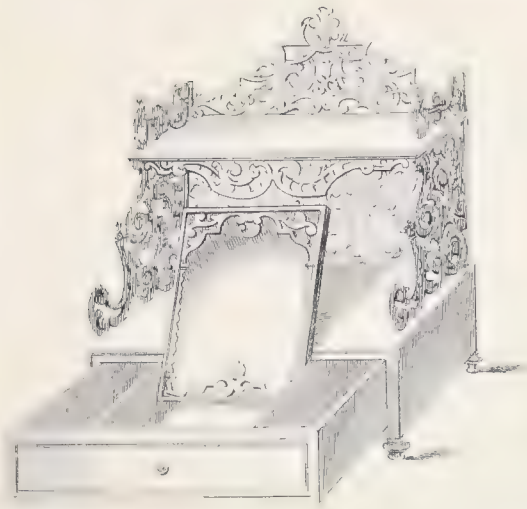
Fig. 7, Nos. 1 and 2, the two parts of the joint before united by the centre pin.

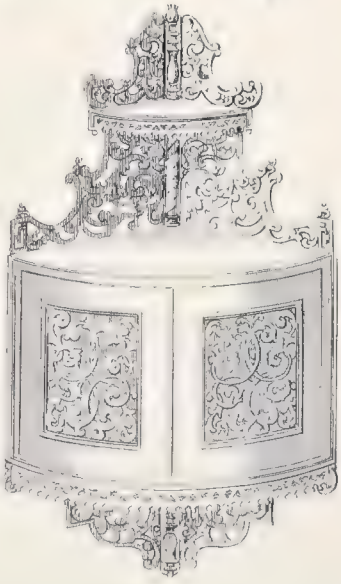
Fig. 8 shows how a square may be converted into a centrolinead, in order to draw any number of lines which will converge to the same point with two given lines: thus, let AE and BD be the two given lines. Draw BA perpendicular to BD, and BF parallel to AE. Suppose the edge DB of the blade of the square to meet the back of the stock at B; fasten a wedge with its vertex in B upon the back BA, so that the vertical angle of the wedge may be equal to the angle DBF; let a pin be fixed in the point A, and another in the point B, and the instrument be moved so that the back AB of the square may be upon the pin A, and the side BC of the wedge upon the pin B; then, if the instrument be stopped at any place, a line drawn by the edge BD will tend to the same point to which the lines AE and BD converge.

In Fig. 9, AH and CI are the two given lines, BE and BF represent the edges of the legs of the instrument, and BK the drawing edge of the blade; then all the lines will tend to the point D in the circumference of the circle ABCD.

Sofa, Modern Gothic, & Cornice.

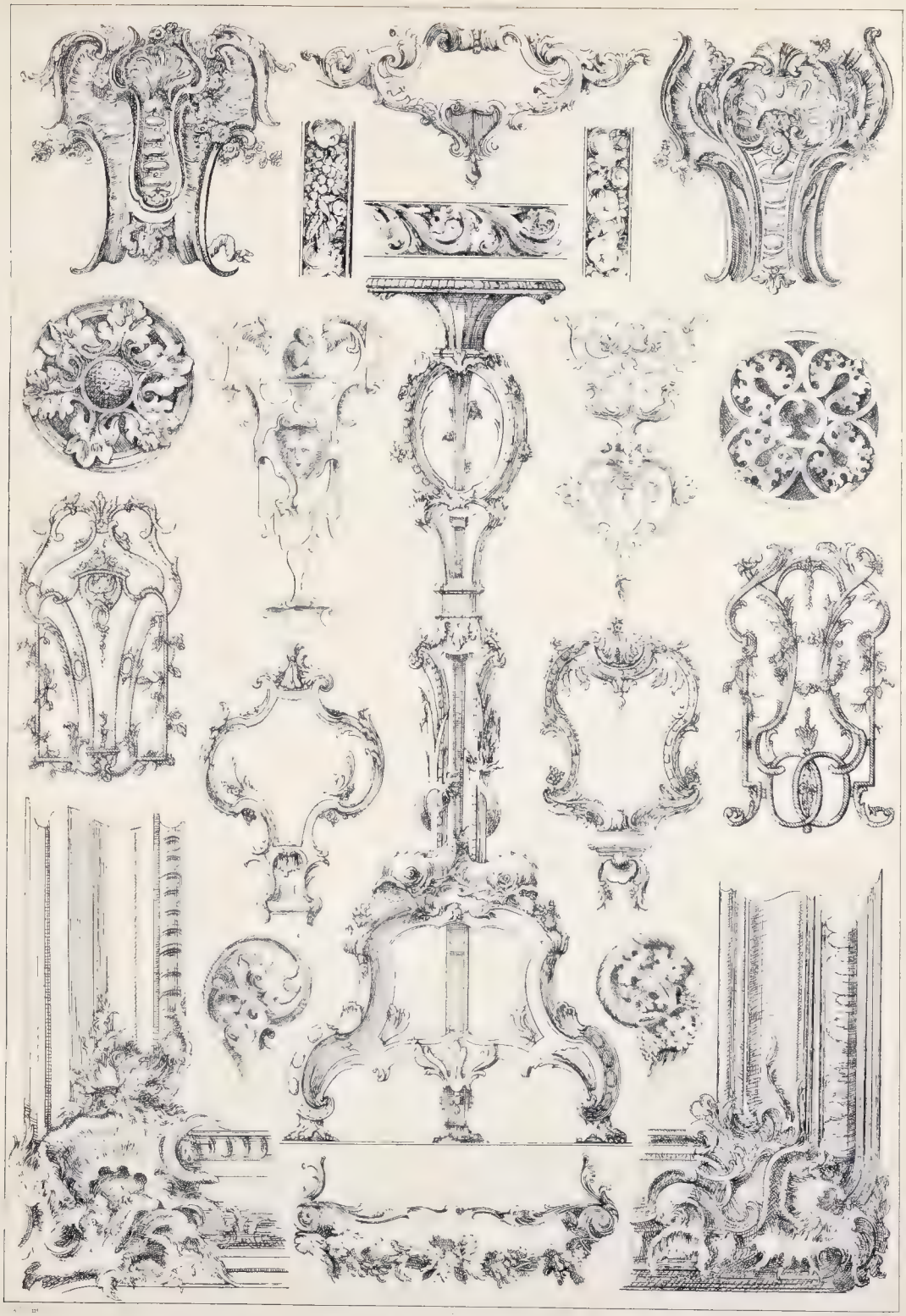
Sofa, Modern Gothic, & Cornice,





Designs for Furniture

from the Paris Exposition

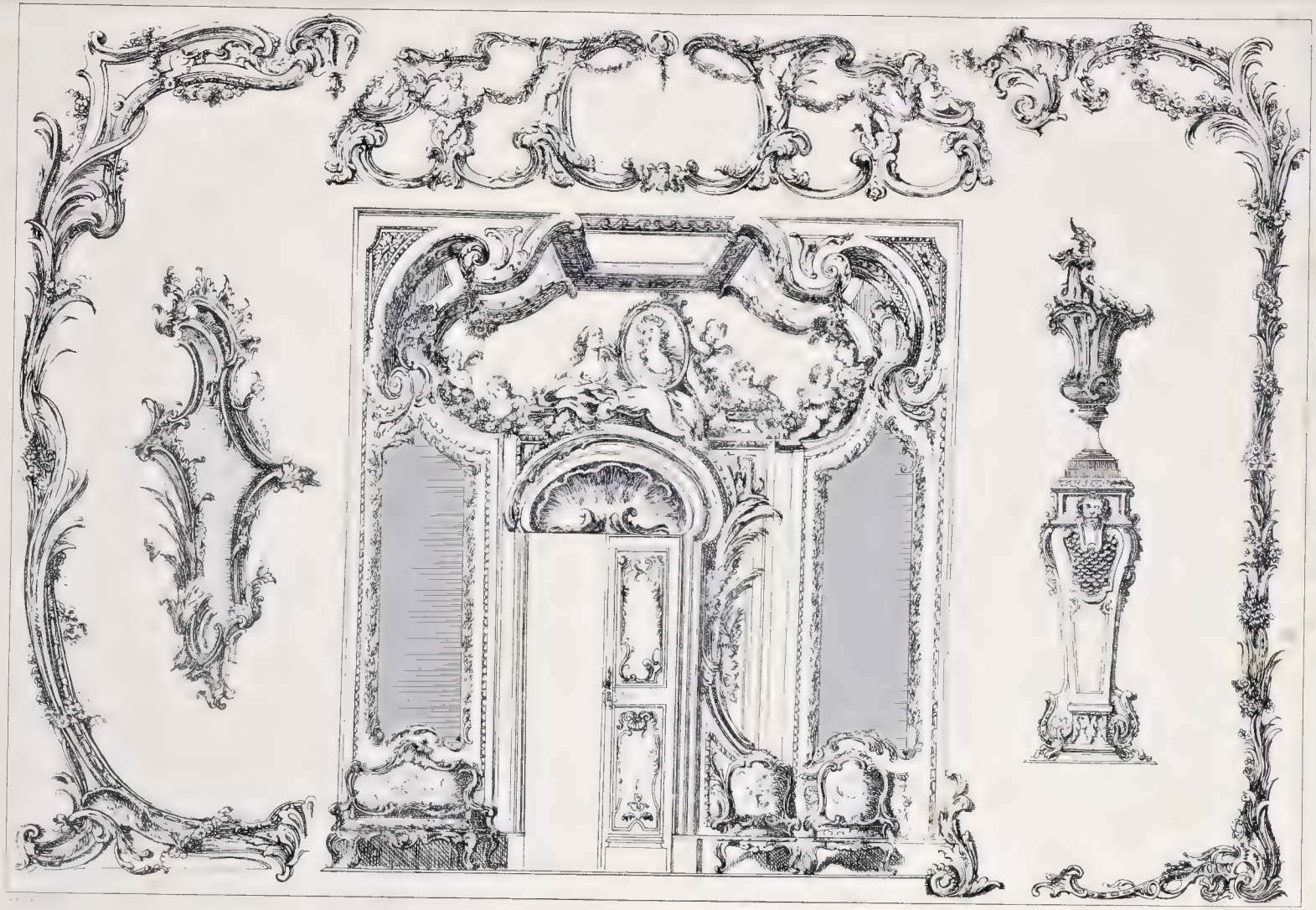


Flower Stand, Brackets, Parts of Fire Screens &c,
Styles Various

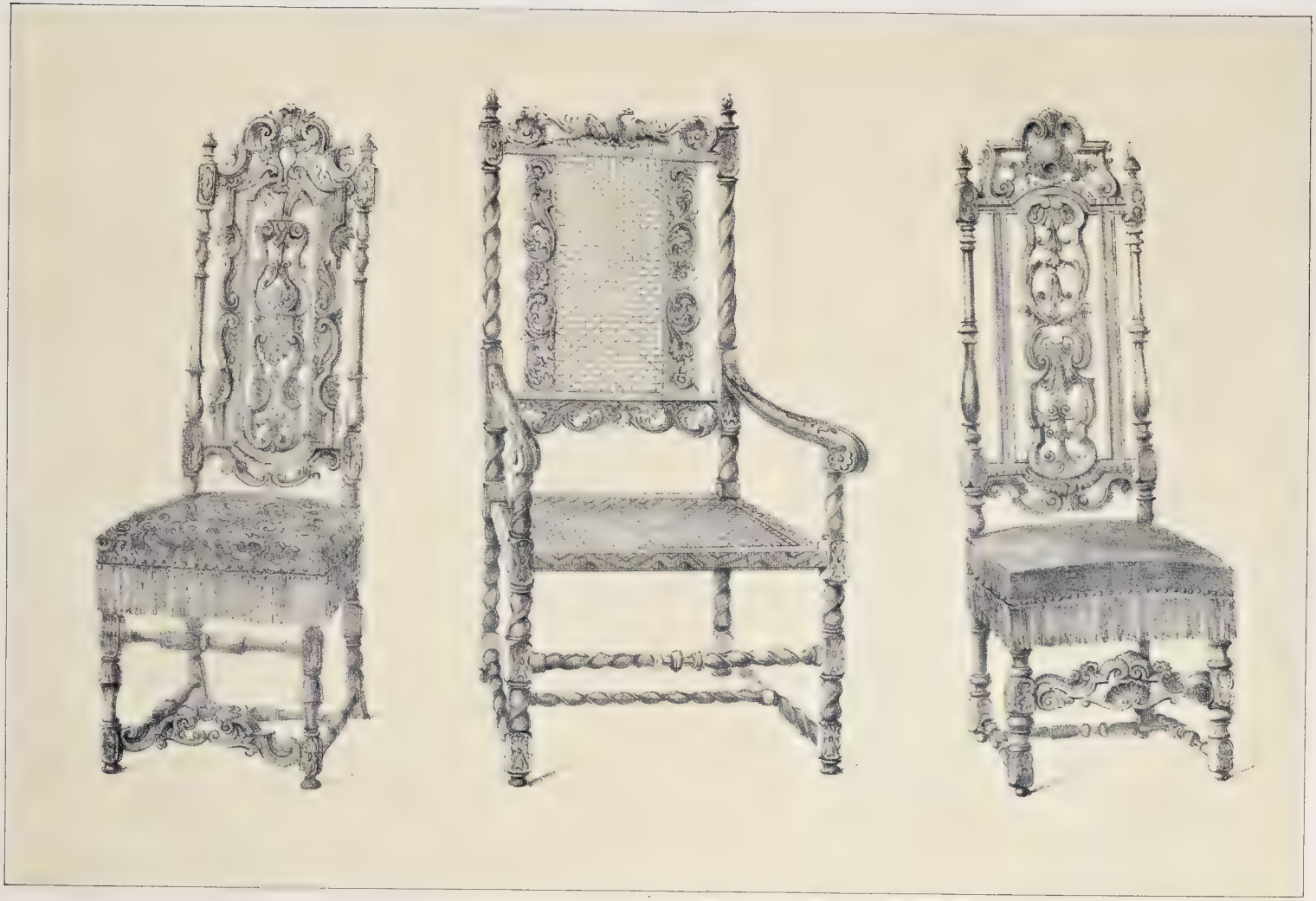
Designs for Chairs

from the Paris Exposition

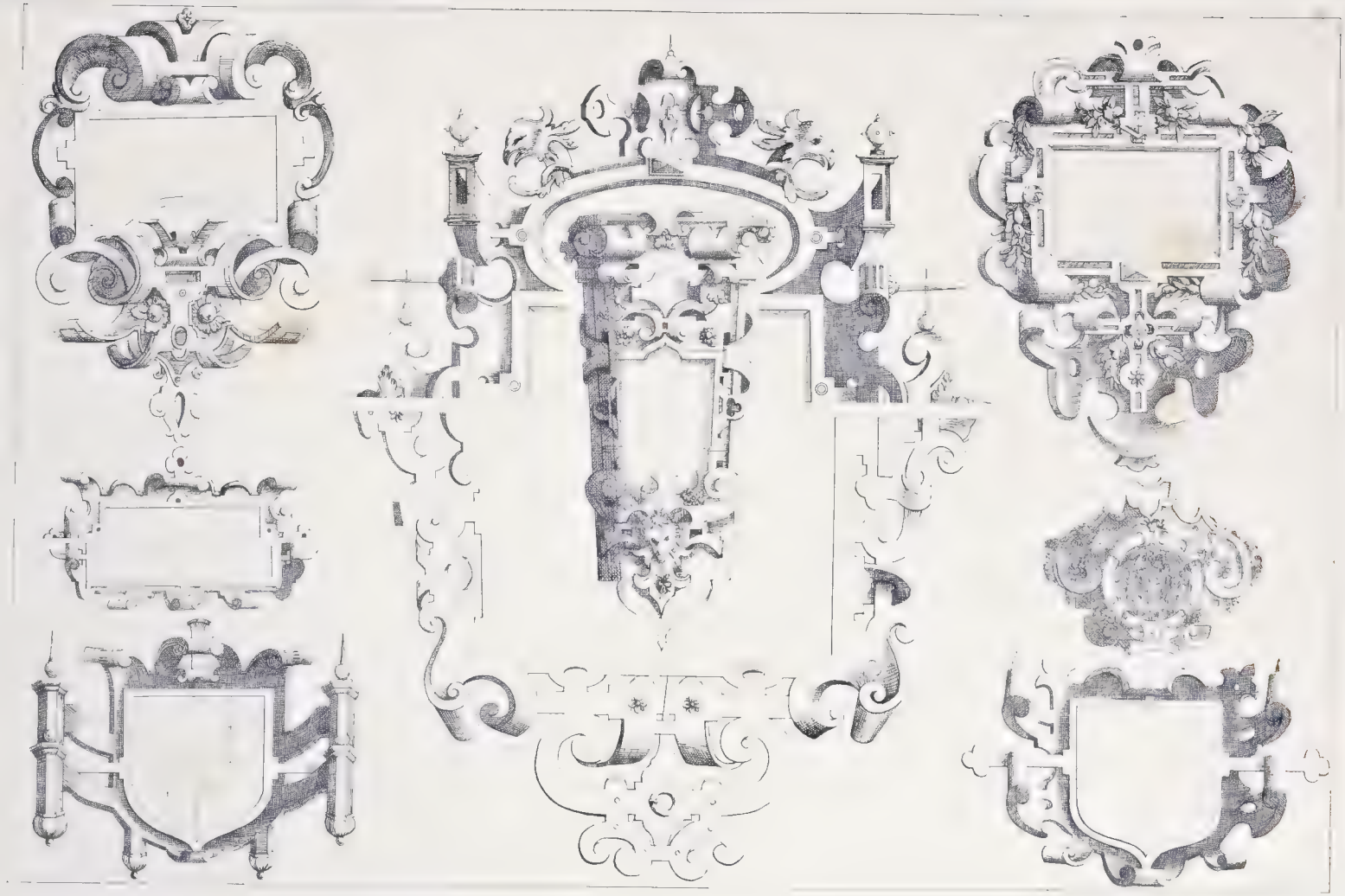
Elizabethan Panel, Capitals &c.



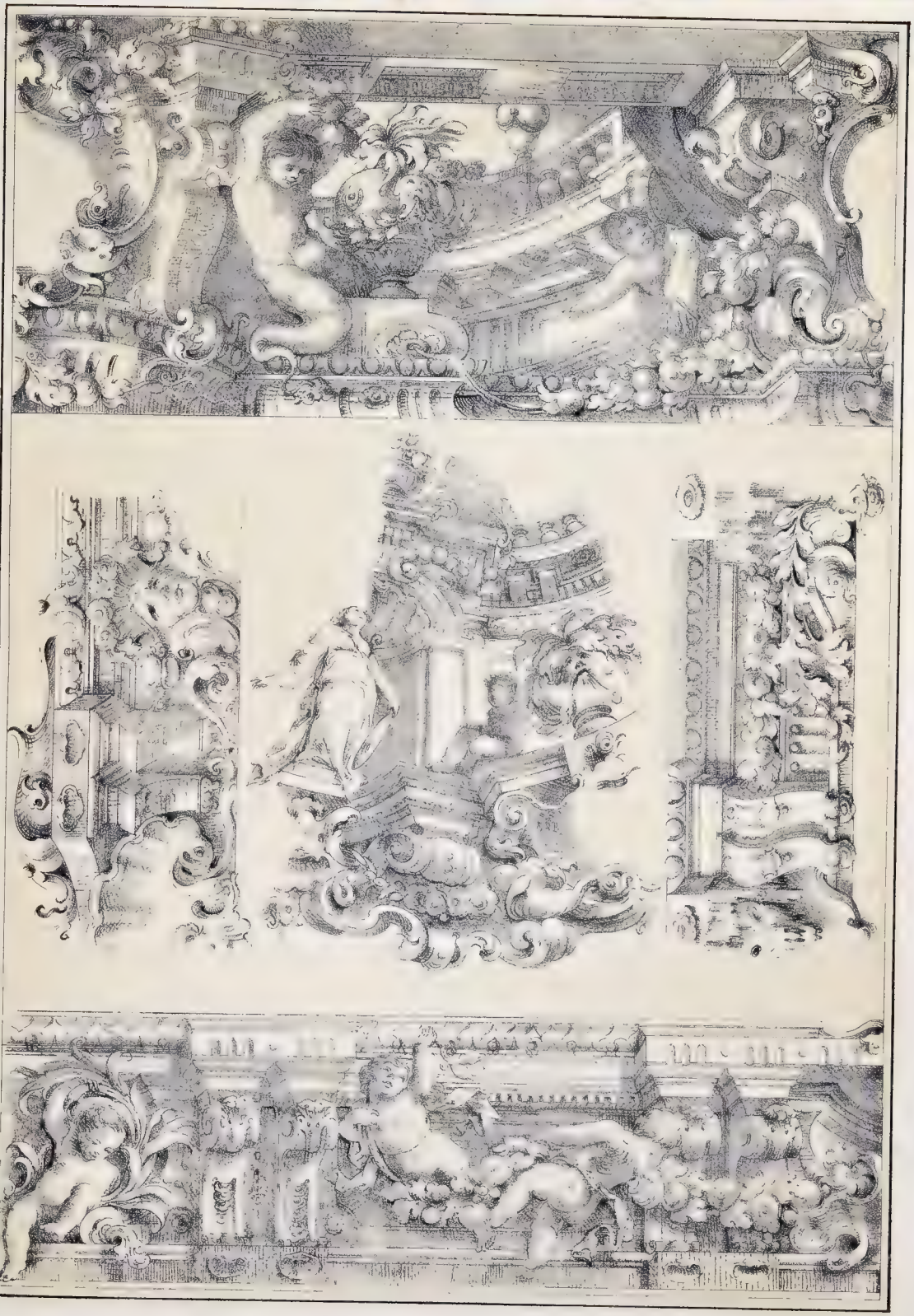
Interior Decorations, &c.
Style Old French



Chairs of the 16th Century.

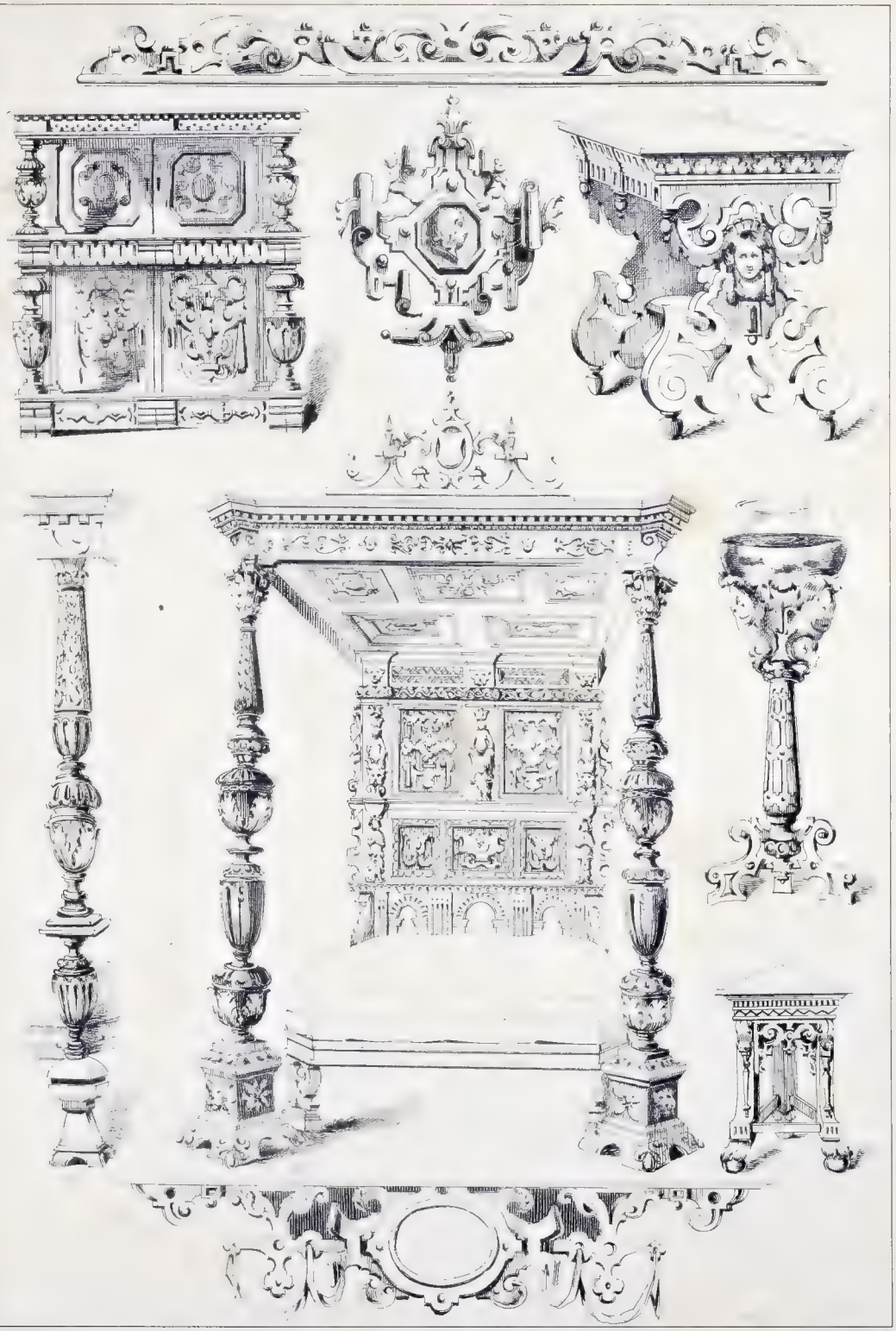


Style Elizabethan Shields &c.



Italian Decorations.

Italian



Ancient Furniture.

London A. Edinburgh.

Designs for Chairs &c.

from the Paris Exposition

PLATE II.

A. F. Thomas

London & Edinburgh

Designs for Chairs.

from the Paris Exposition

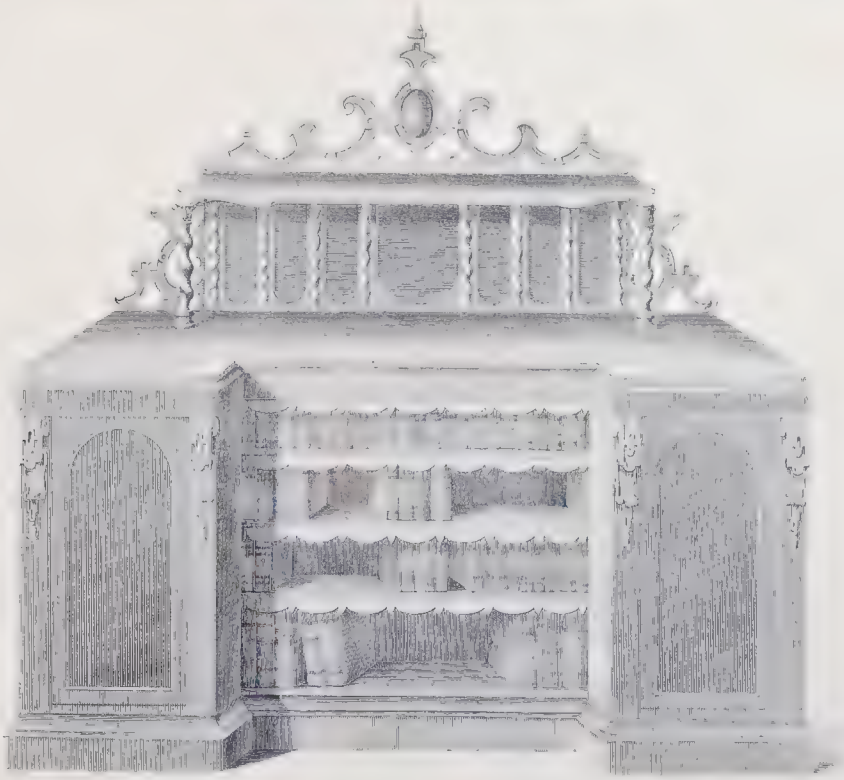
PLATE LI

Tables &c. Style Louis Quatorze

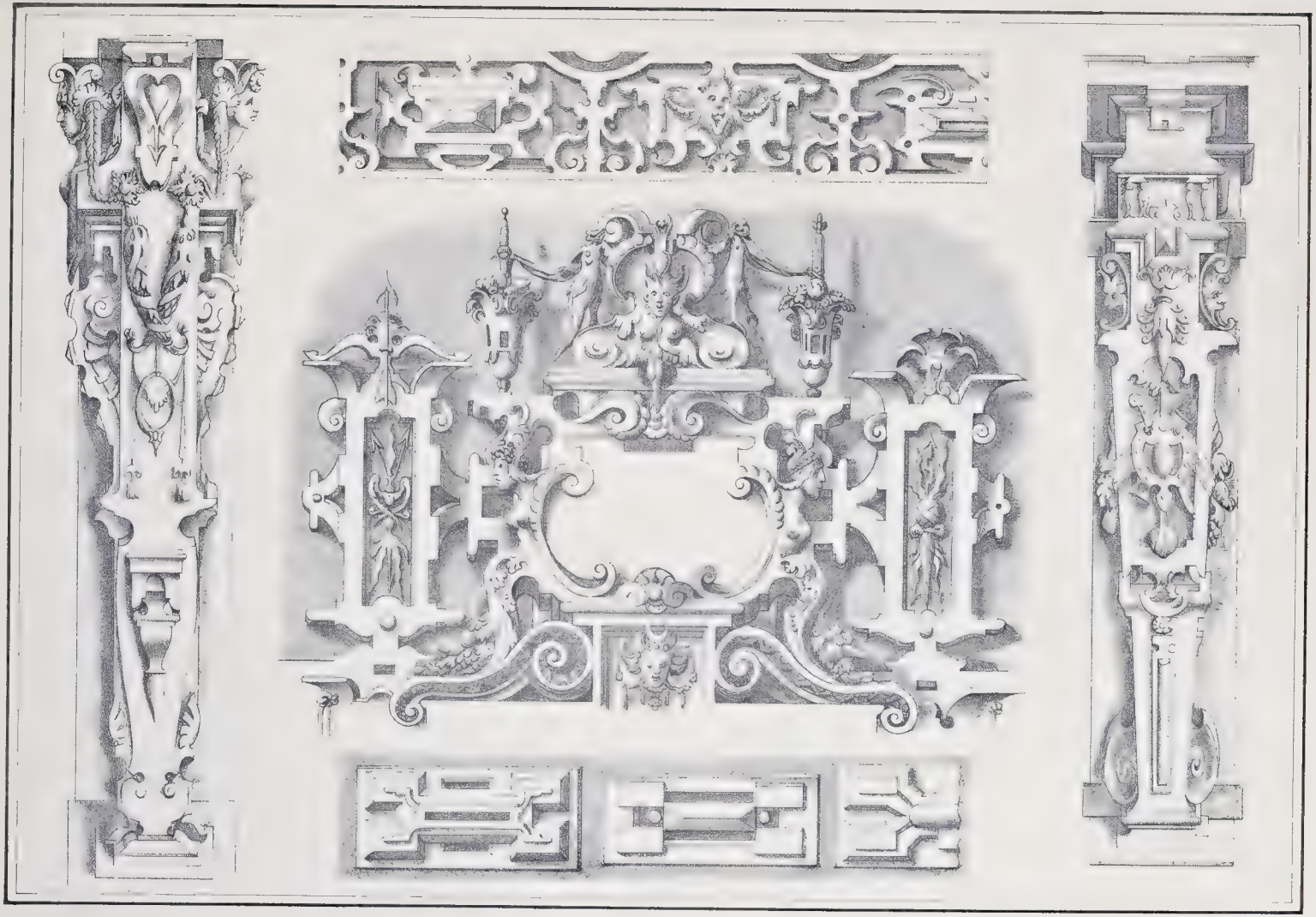
Pier Glasses & Tables

Style Louis Quatorze

Style Louis Quatorze Interior Decorations.



Chiffonier



Flemish

Italian Ornaments

Cornices, Pedestals Brackets &c.

Styles Various.

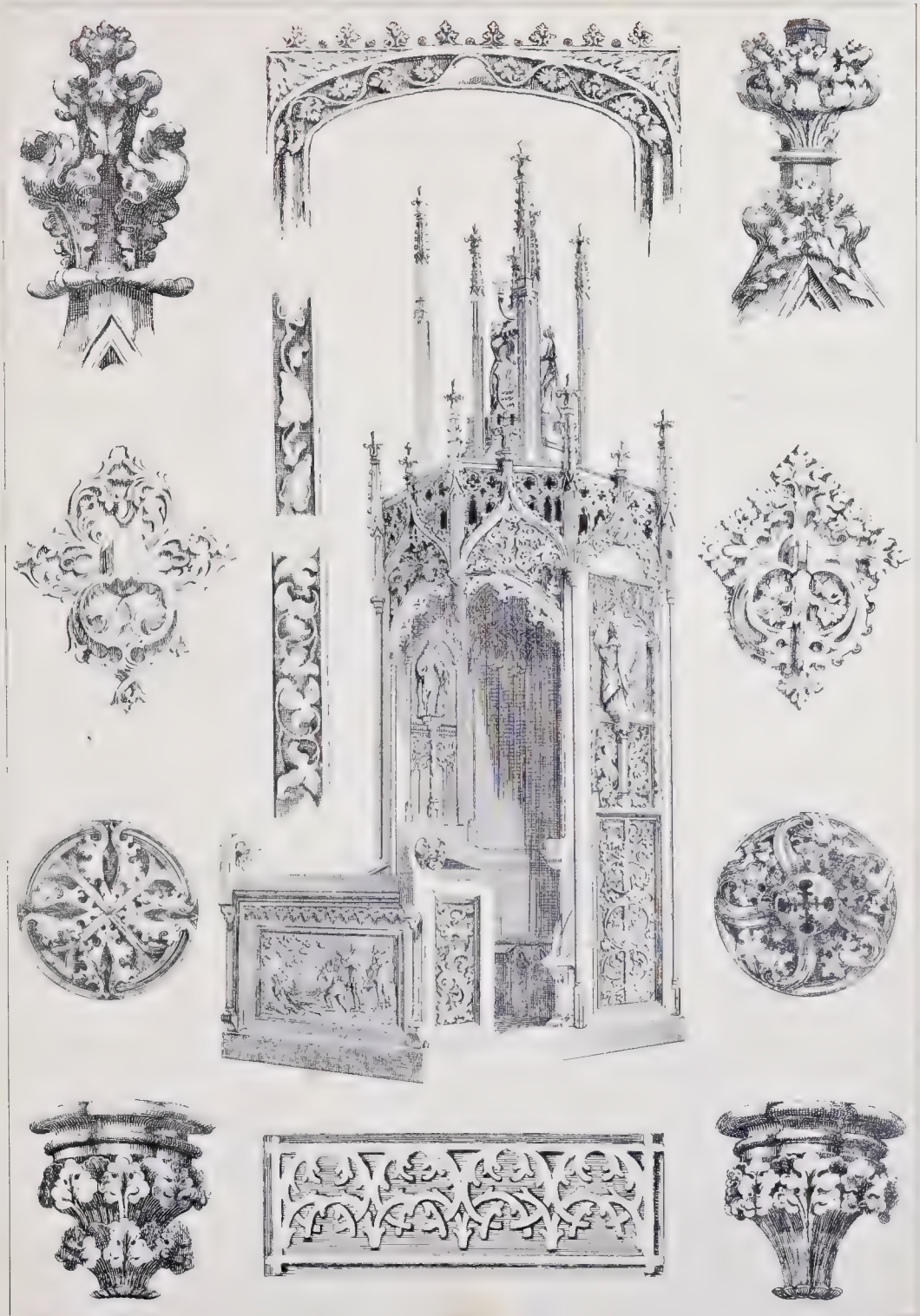
Dressing Glass Frames, Cornices, Pier [illegible] Pedestals &c.

Elizabetham & French

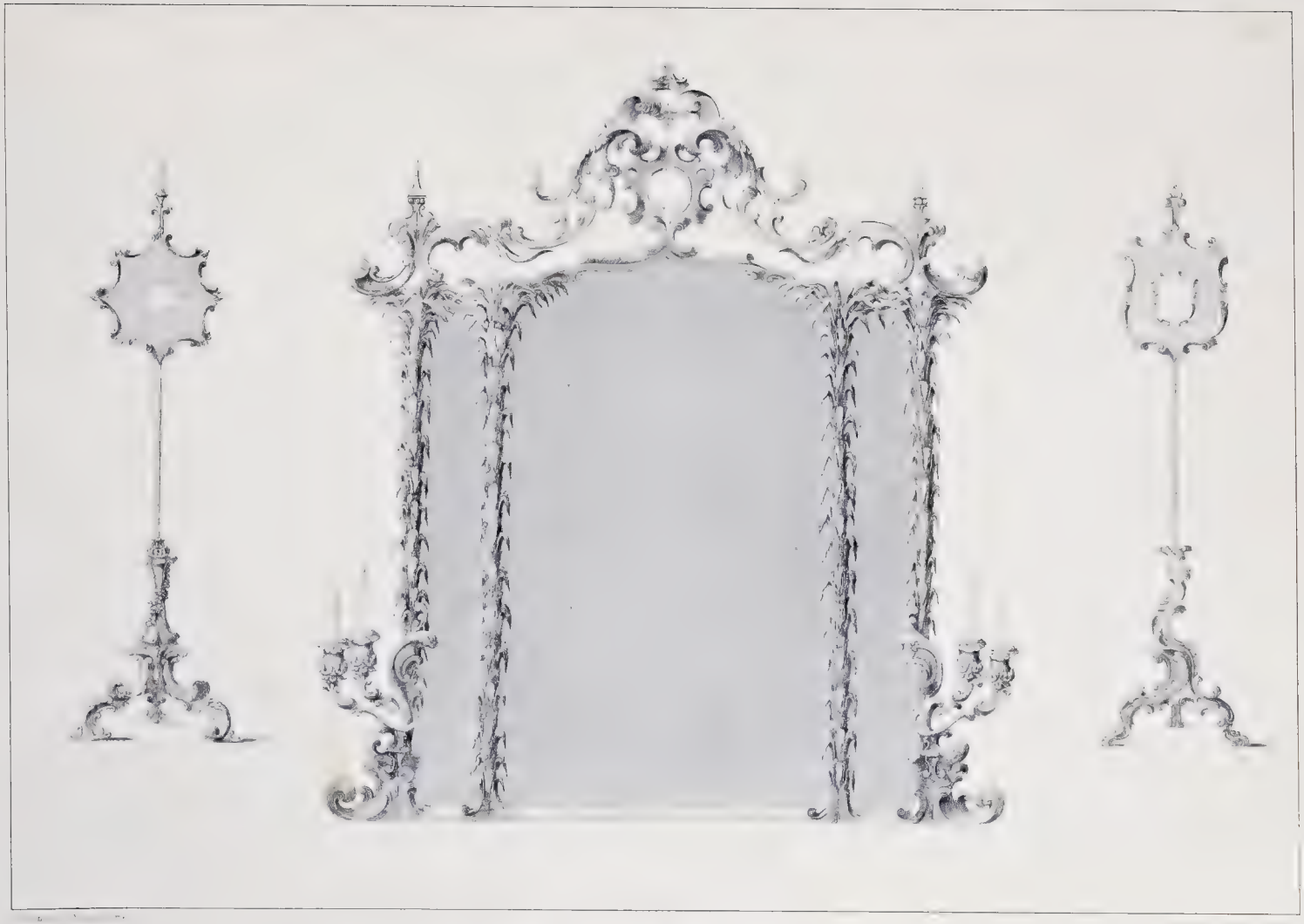
Designs for Chairs &c.

Glass Frames, Panel Trusses, Brackets &c.

Style Louis Quatorze

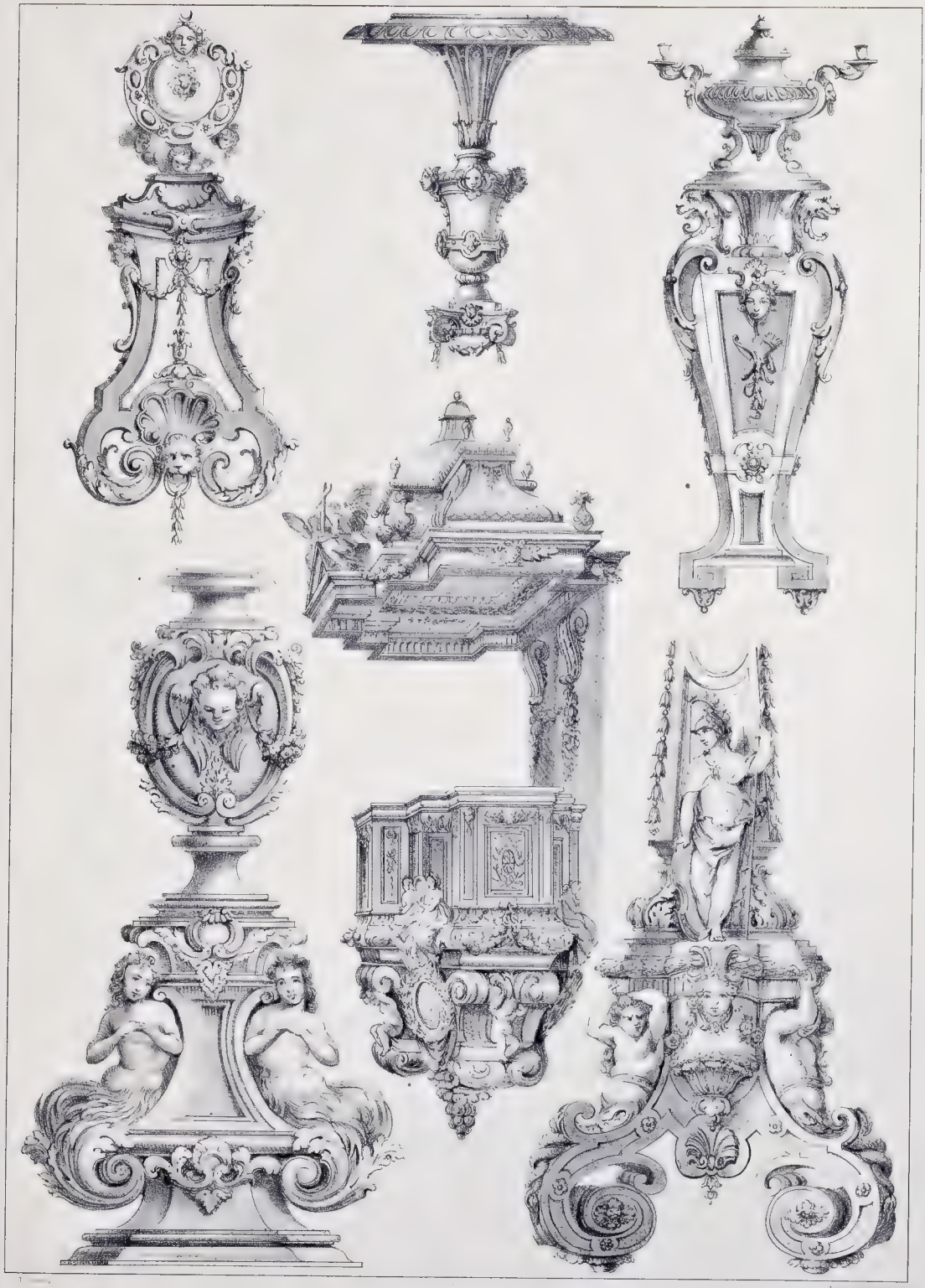


Gothic Church Furniture, Pricdieu, Finials &c.



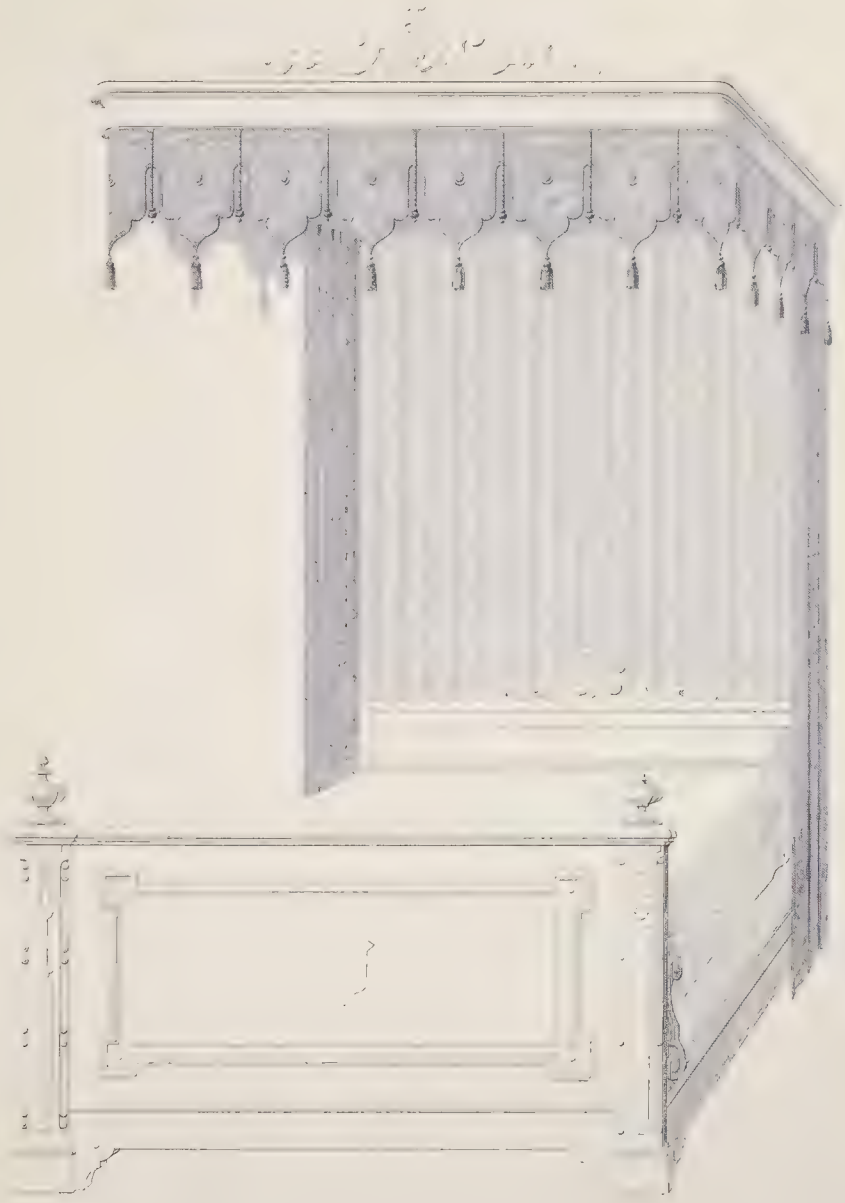
Pier Glass & Fire Screens

Backs of Chairs &c.

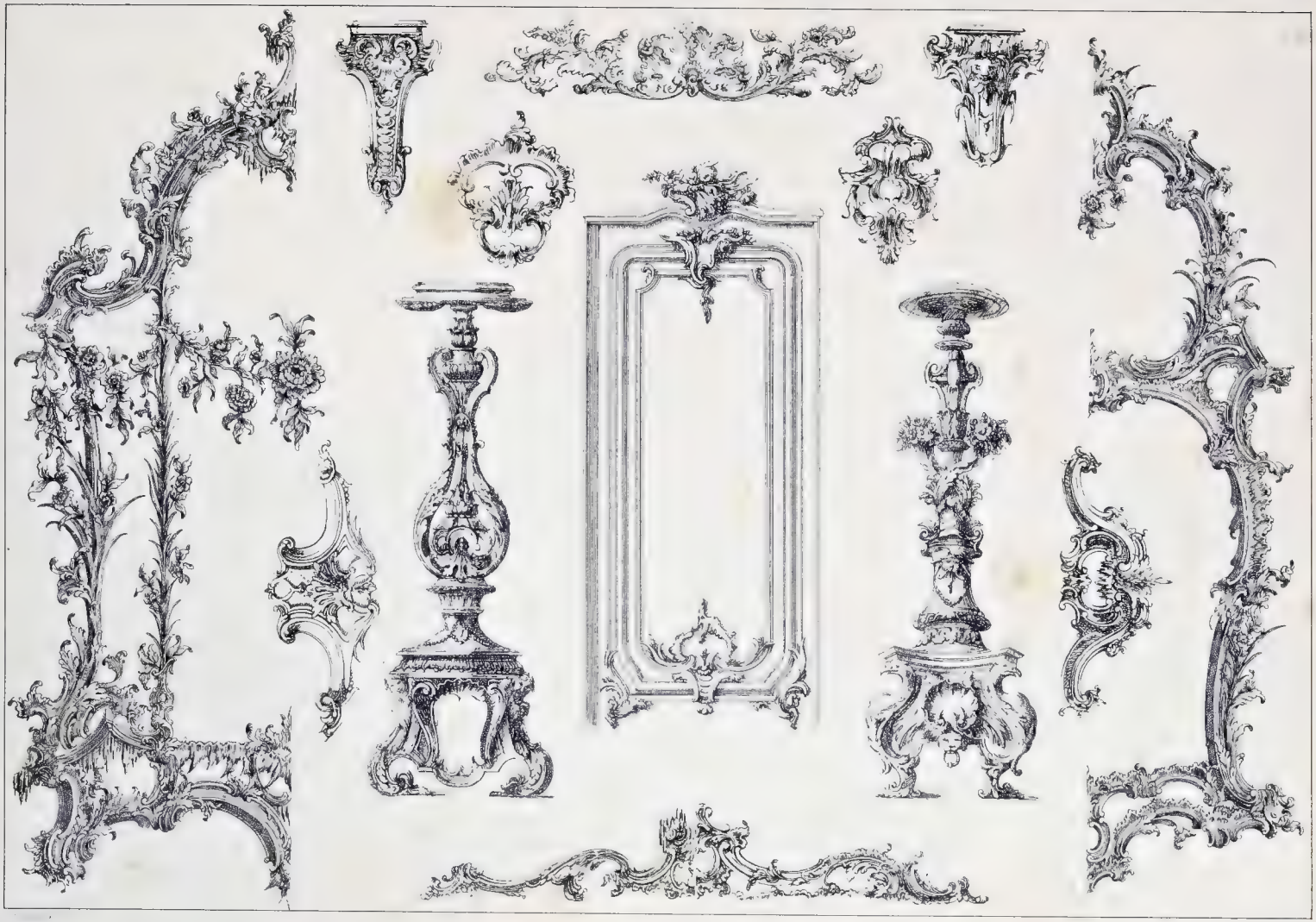


Church Furniture &c.

Inlaid Table Top, Candelabra &c.



French or Canopy Bed



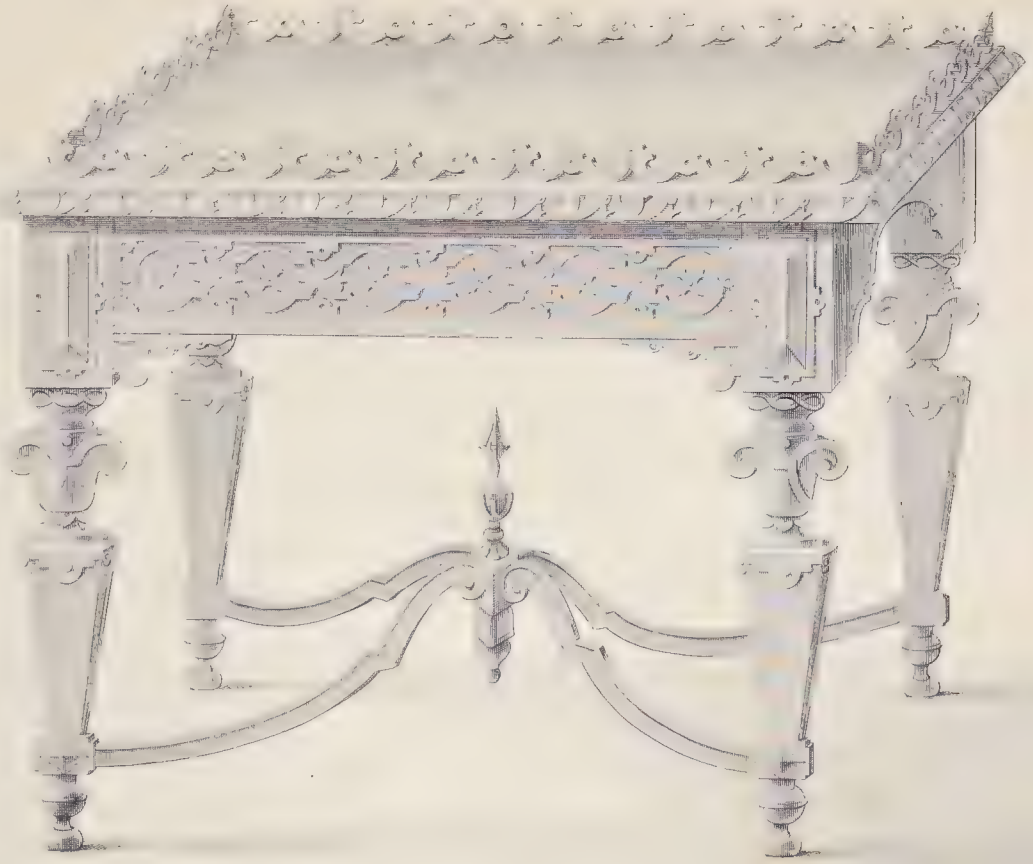
Frames, Panel, Candleabra, Brackets &c.
Style Louis Quatorze

Cornice, Shields, Panels &c.

French & Elizabethan

Elizabethan Pillars, French Panels &c.

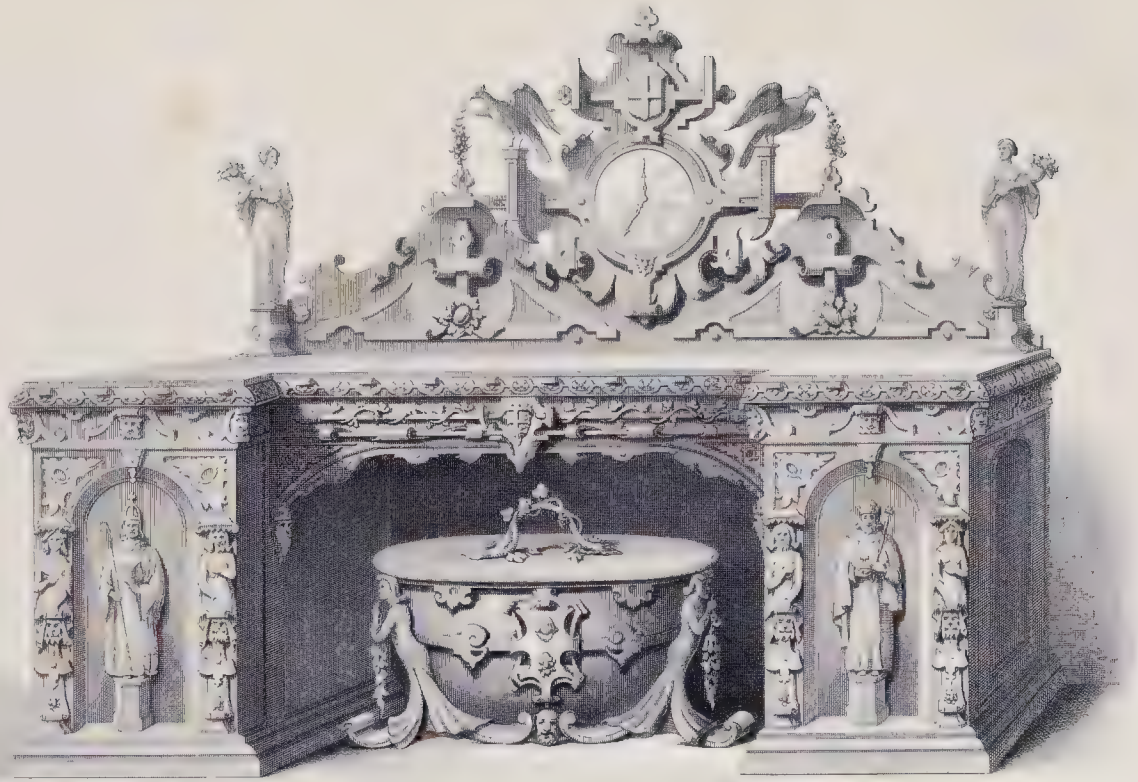
Table, Elizabethan Pillars &c.



Table

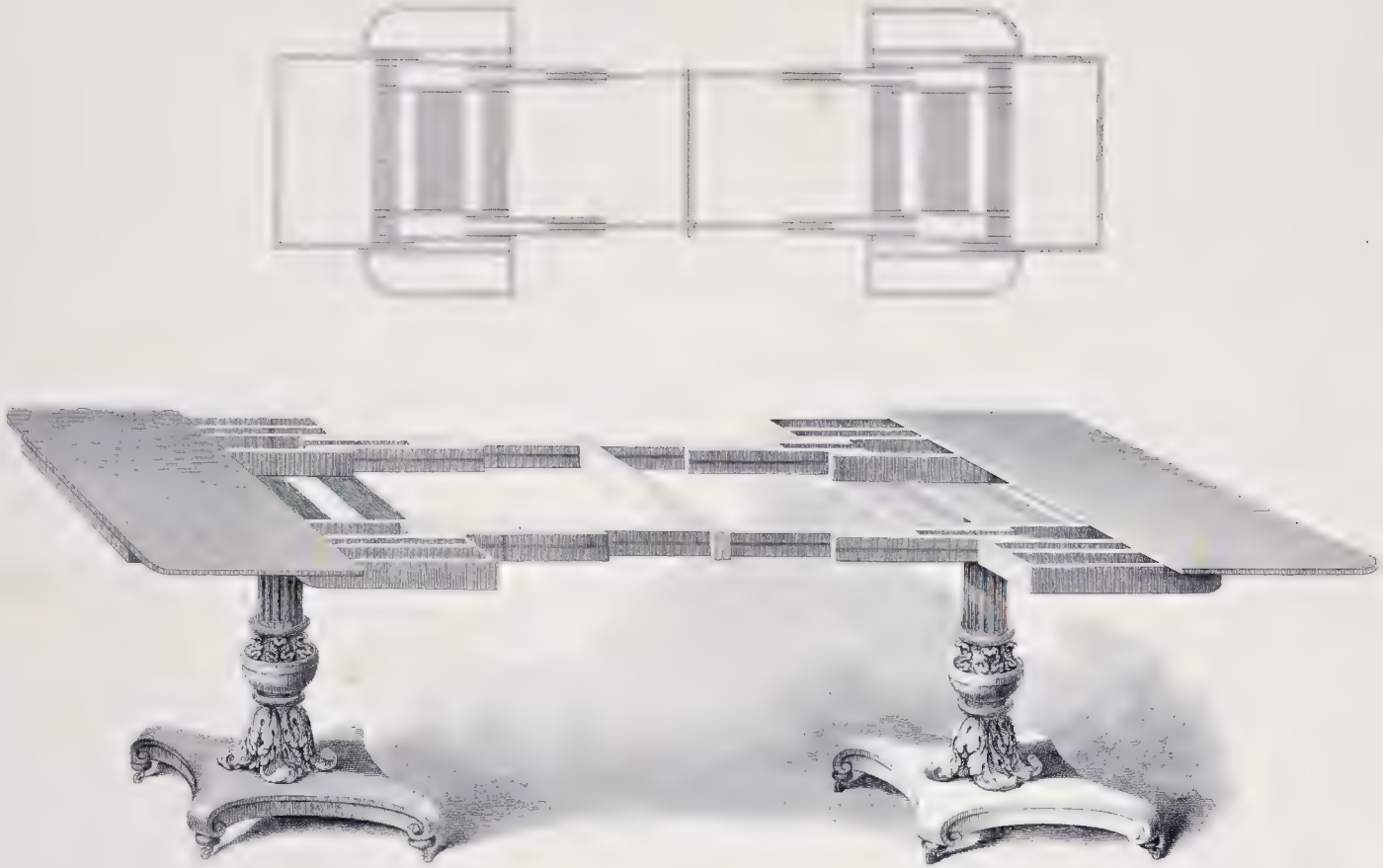
Candleabra Shield Knobs &c.

Details of Church Furniture carved in Wood

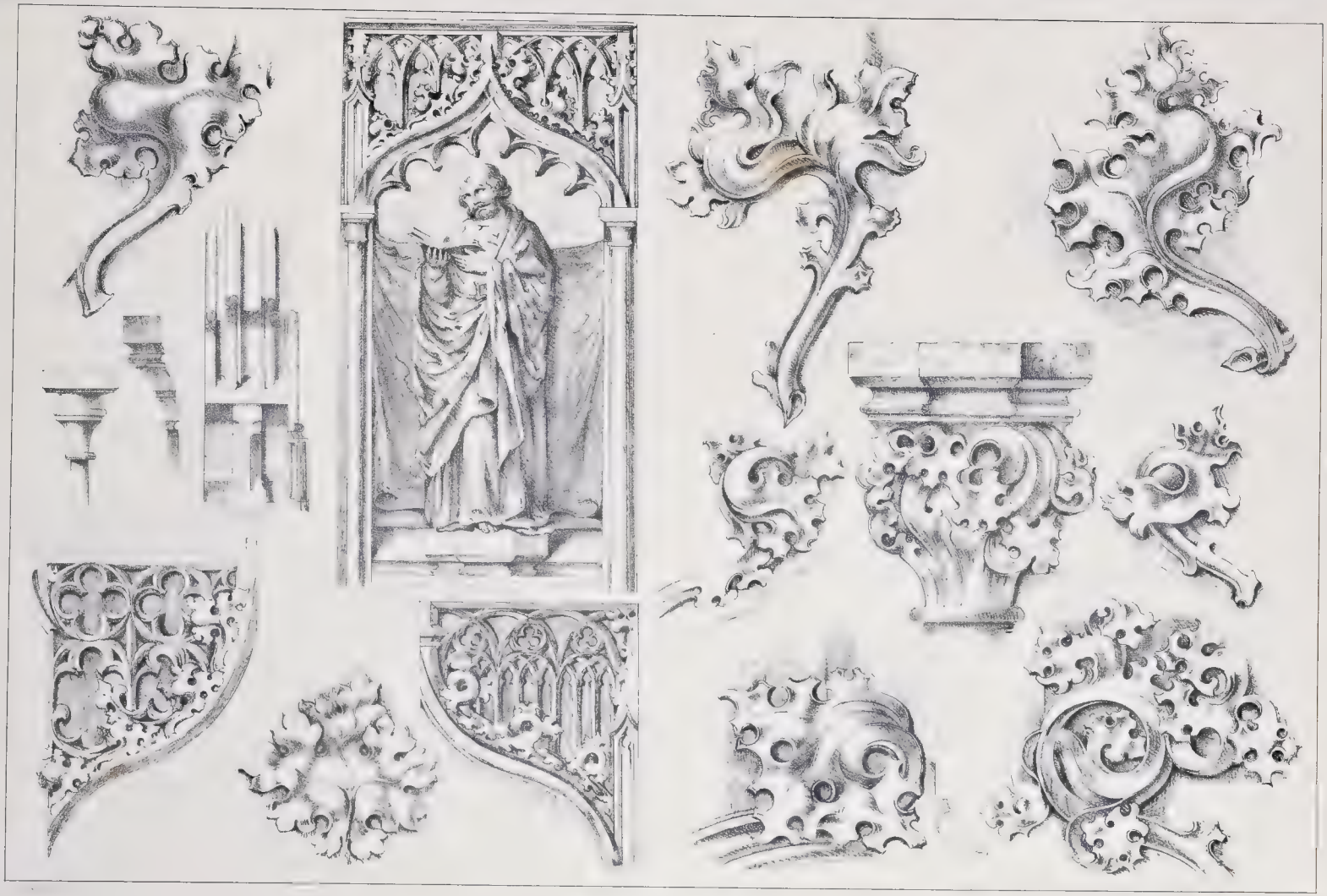


Sideboard, Elizabethan Style

Pier Table Brackets &c.



Telescope Table.



Church Furniture

Details of a German Gothic Screen

Elizabetham Shields.

Ancient Chairs.

Panels, Shields, Pillars &c.
French & Elizabethan.

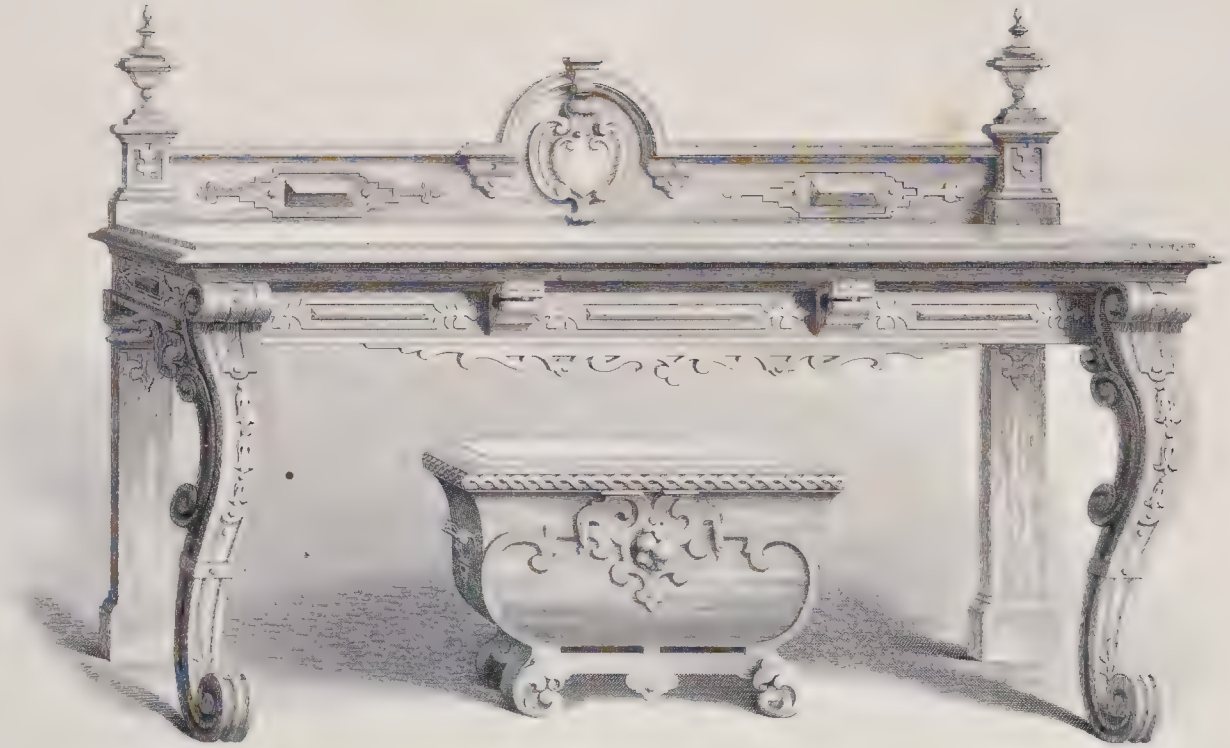
Gothic Ornaments from York Minster.

Spandrells from Henry VII Chapel.

The Queen at Stanhope Lodge.

Cornice & Chair Backs.

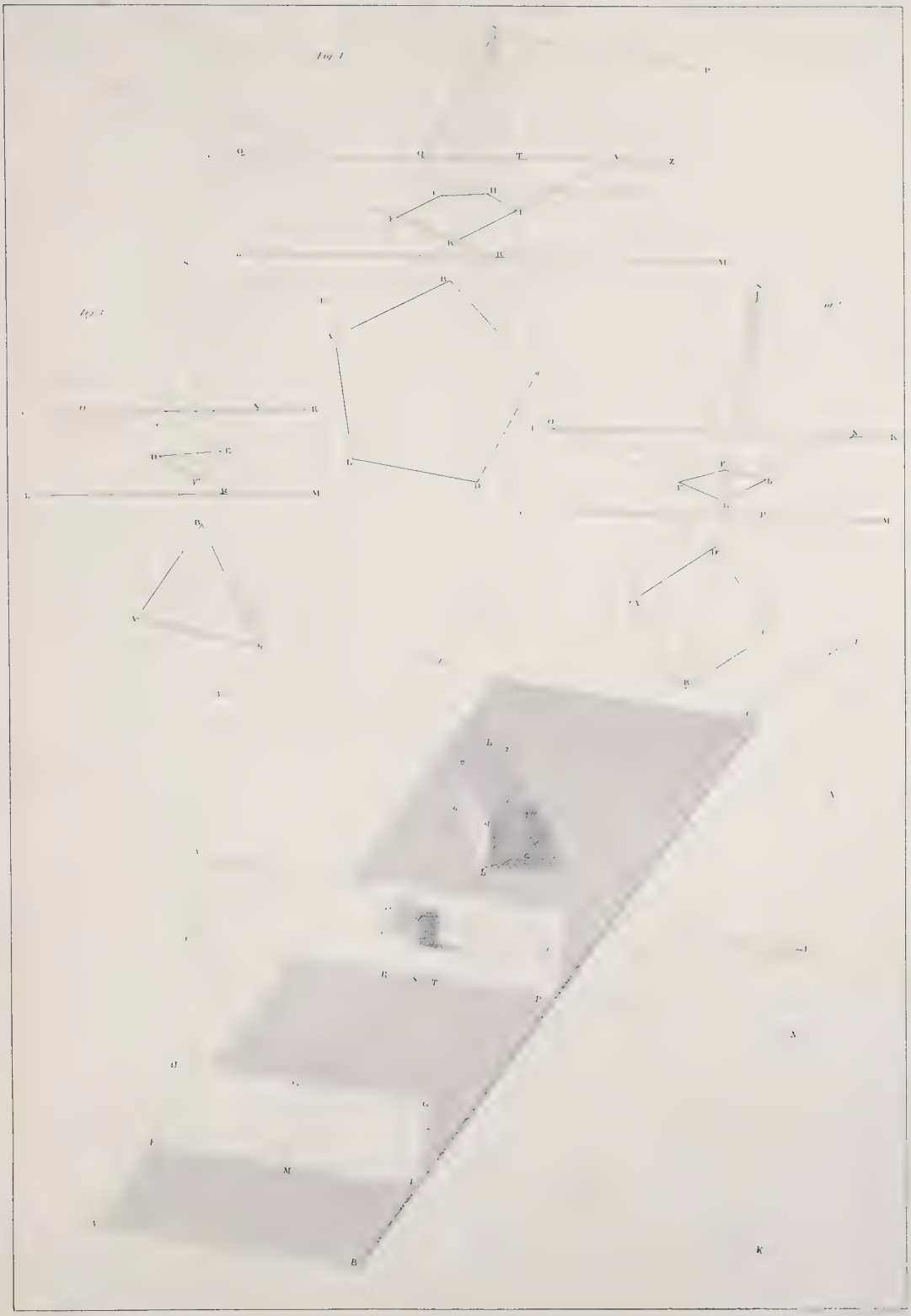
Shields, Trusses &c.
Elizabethan.



Sideboard & Sarcophagus.

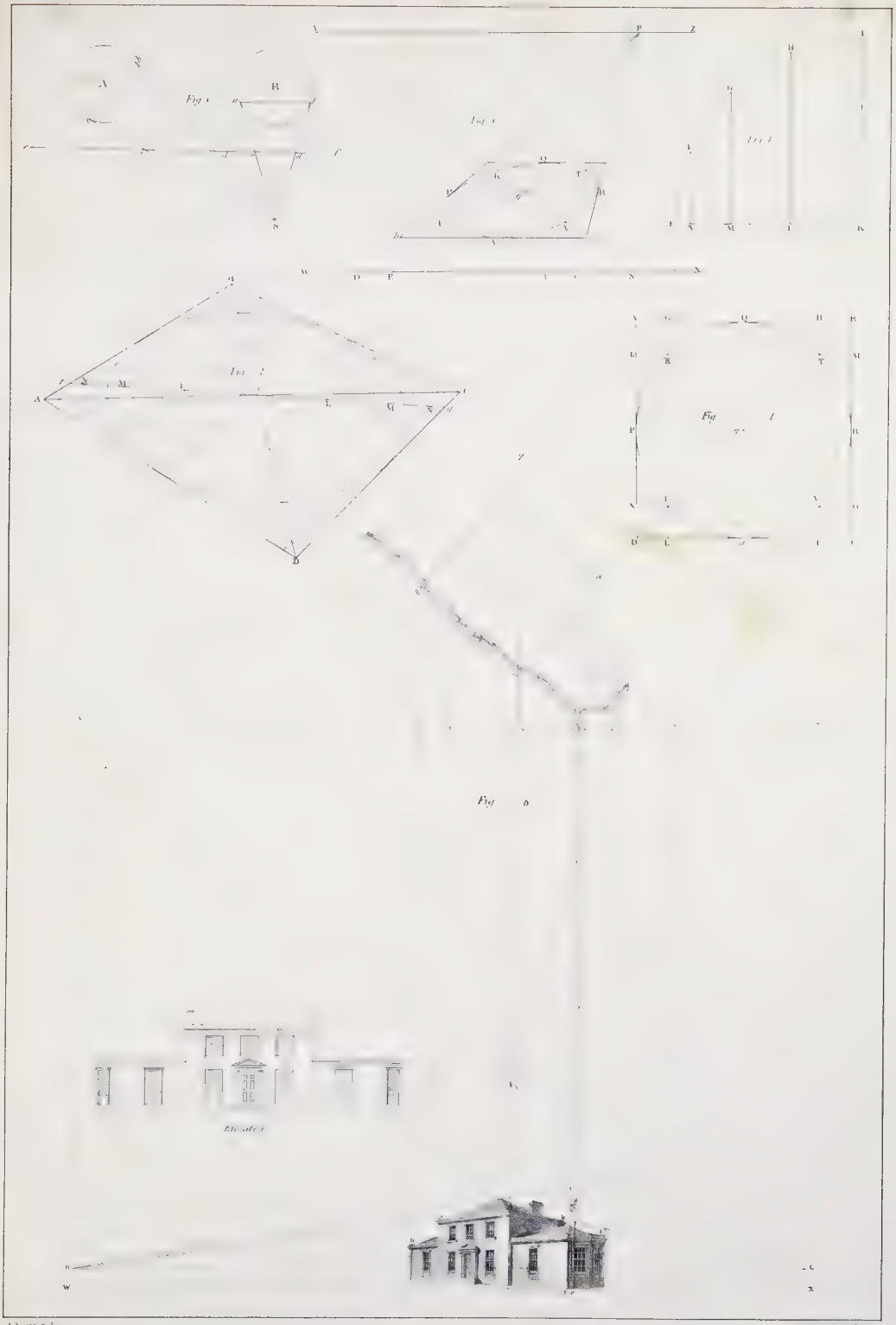
Decorated Ceilings
Italian Style

Ceilings &c.



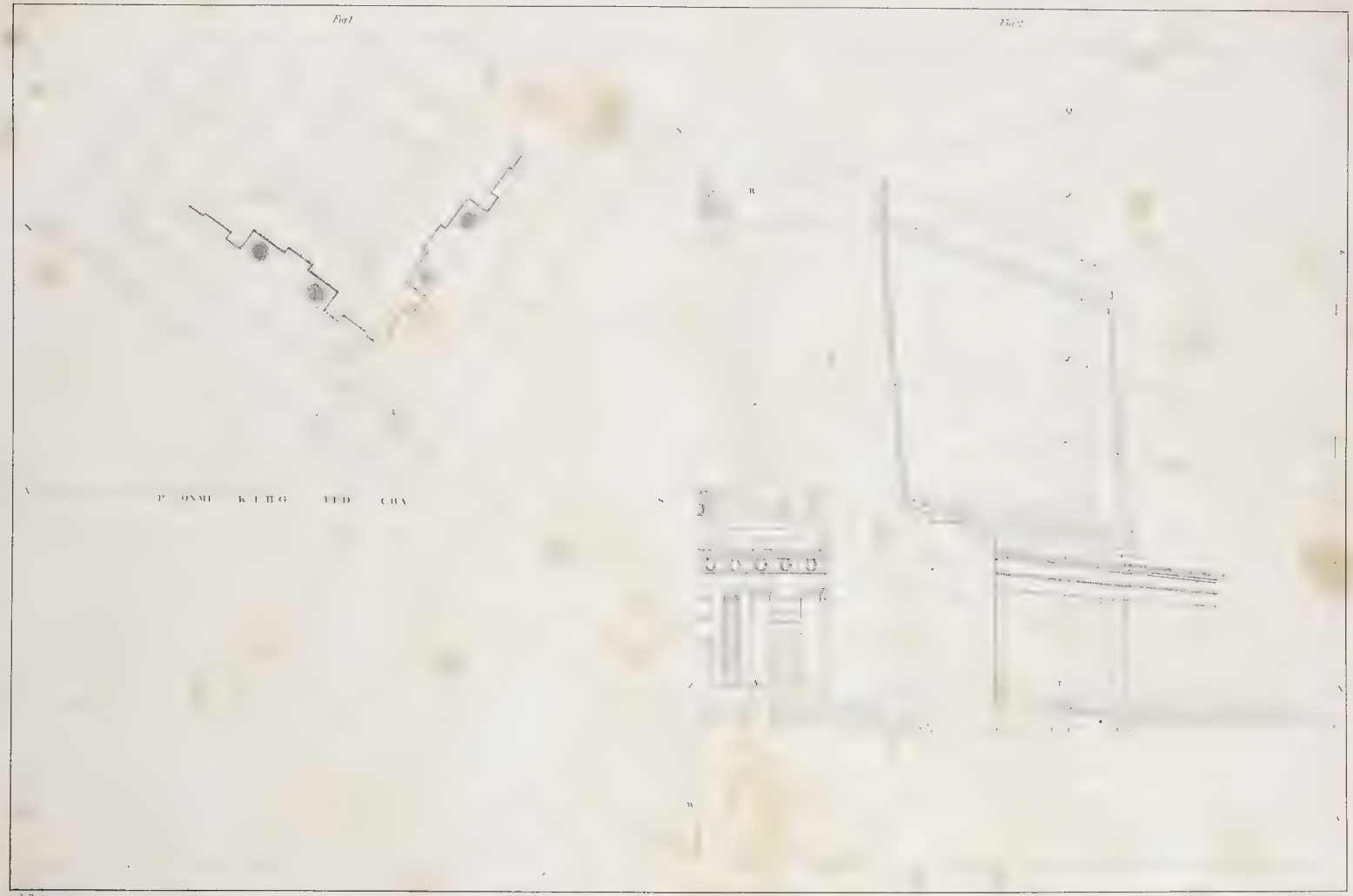
Perspective

FIRST PRINCIPLES



Perspective,

FIRST PRINCIPLES



Perspective.

Perspective